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A National Newspaper for Every Branch of the Industry

Automotive Daily News

CARS | SHOP EQUIPMENT | TRUCKS | AVIATION | PARTS | ACCESSORIES | TIRES

Vol. 10. No. 1200 — Entered as second class matter Aug. 27, 1925 Post Office, N. Y., N. Y. Under Act of March 3, 1879. — NEW YORK, FRIDAY, MAY 2, 1930 — 10 Cents. $12 Per Year

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MAY 8 1930
DETROIT

APRIL OUTPUT PLACED ABOVE 500,000

Accessory, Parts Makers Report Pick-up in March; Further Gains in April

Grand Index of Shipments Reaches 155 in Third Month, as Against 138 in February, And Continues Upward

NEW YORK, May 1.—Manufacturing operations in the automotive parts-accessory industry continue to gain. March business ran well ahead of February and preliminary reports show that there was a further favorable increase in April, according to the Motor and Equipment Association.

Shipments in March were heavier in all four divisions, original equipment, service parts, accessories and service equipment, official figures show. The greatest improvement was reported by suppliers of original equipment to the car and truck manufacturers and of garage repair equipment and tools to the trade. Business of member wholesalers in the association was also heavier in March, the increase over February being approximately 13 per cent. In face of this increase, accounts receivable for the wholesalers reporting declined 1 per cent. A moderate but consistent improvement in operations can be expected for the near future.

The grand index of shipments for all groups of manufacturer members reporting their figures to the association for March stands at 155 per cent. of the January, 1925, base index of 100, as compared with 138 in February, 132 in January and 241 in March a year ago.

Reports by divisions of member manufacturers' business in March follows:

Parts-accessory makers selling their products to the car and truck makers for original equipment made shipments aggregating 167 per cent. of the January, 1925, base index, as

(Continued on Page 2)

UNIVERSAL CREDIT REPORTS VOLUME IN APRIL OF $30,000,000

Detroit, May 1.—The Universal Credit Company, which finances time payments sales of Ford cars, reports April volume close to $30,000,000, compared with $20,000,000 in March. The current rate of growth indicates a volume of over $300,000,000 for 1930.

During 1929, the first full year of operations, Universal Credit Company purchased nearly 500,000 retail time sales contracts from customers of Ford dealers, representing about $200,000,000.

The Ford credit organization in less than two years has established thirty complete branch offices, covering thirty-five states. During this period nearly 700,000 Ford car buyers have been financed on Universal Credit Company plans.

Company began operations in June, 1928, and in the six business months of that year, during which twelve branch offices were established, a volume of $15,000,000 in time sales contracts was purchased.

France Cuts Motor Car Luxury Tax

Paris, May 1.—The reduction of the French passenger automobile luxury tax from 10 to 6 per cent. went into effect yesterday.

Coincident with the tax cut, most of the French car manufacturers announced factory price cuts to the extent of the luxury tax reduction.

At the same time, the luxury assessment of 5 per cent. on commercial cars was reduced to 3 per cent., with corresponding reductions by the manufacturers.

It is reported here that the American manufacturers operating here will follow with price cuts similar to those of the French makers.

BUICK APRIL SHIPMENTS TOTAL 9,601 CARS; MAY SCHEDULE FOR 9,374

Detroit, May 1.—Buick Motor Company shipped 9,601 Buick and Marquette cars in April, as against 8,760 in March, and 11,119 in April, 1929. May schedule calls for an output of 9,374 cars.

Retail sales during the past month have shown a decided improvement, particularly in the East, according to Buick officials. Increase over March is approximately 50 per cent. Dealers' stocks are considerably lower than a year ago, and at present levels are considered very satisfactory by sales officials.

FLEETWOOD BODY PLANT MOVES TO DETROIT

Detroit, May 1.—The Fleetwood Body Corporation has completed its removal to Detroit, from Fleetwood, Pa. Its new plant on Fort Street has a total floor space of 1,500,000 square feet and the value of the property is in excess of $5,000,000. The corporation will employ 3,000 men and is said to be the largest custom body plant in the world. The corporation will retain its permanent salon at 10 East 57th St., New York city.

GRAHAM-PAIGE OUTPUT GAINS 37% IN APRIL

Detroit, May 1.—The Graham-Paige output in April was 6,754, against 4,937 in March, an increase of 37 per cent.

Total production so far this year has been 18,428.

CURRENT ESTIMATES INDICATE 18% INCREASE OVER MARCH

Industry Still Holds Close to Actual Sales; Ford And Chevrolet Continue Fast Pace; Employment Is Gaining

DETROIT, May 1.—Estimates here from usually well informed sources place motor vehicle production for April at slightly over 500,000 units. This will compare with 422,108, in March, 1930, and with 621,000 in April, 1929. It would represent a loss from last year's record April output of just a shade under 20 per cent. and a gain of about 18 per cent. over March.

This corresponds with estimates previously made by Automotive Daily News and in general keeps step with the reduction in sales totals that have held since the beginning of the year.

Chevrolet and Ford have both been active in production during April and when the figures are announced for those companies they will be found to have made remarkable records even in comparison with the record schedules that were maintained in April, 1929.

The slow but steady increase in automotive employment in the Detroit district lends support to the preliminary estimates regarding April production. Leaders in this city are looking to the opening of the construction season as the factor that will absorb much of the unemployed labor throughout the country, thereby stimulating sales in many lines.

Surveys conducted by the sales departments of a number of Detroit manufacturers indicate favorable dealer conditions as regard stocks on hand. The situation as regards used cars is indicated as favorable, with spots of weakness. Certain price classes of used cars are in better condition than ever before, others are not. This checks with the results of nation-wide surveys that have been conducted by Automotive Daily News through its correspondents in all sections of the United States.

N.A.C.C. Gets Award for Best Service

WASHINGTON, May 1.—The National Automobile Chamber of Commerce last night won the award of the American Trade Association Executives for the most distinguished service rendered by any association to its industry. The achievement on which the award was based was the cross licensing agreement in existence among members of the National Automobile Chamber of Commerce.

Announcement of this award to the automobile trade body was made last night at the session of the United States Chamber of Commerce. Secretary of Commerce Lamont announced the award, which was made by a unanimous vote of the committee in charge. Other members of the committee were Merle Thorpe, Owen D. Young,

(Continued on Page 2)

General Motors Bonuses In 1929 Total $8,000,000

NEW YORK, May 1.—Among the activities of General Motors in which stockholders evinced especial interest at the annual meeting yesterday in Wilmington, Del., were the 1929 operations of the various co-operative plans for employees which the corporation has developed in recent years.

This phase of General Motors activity has received particular attention in the past year and Alfred P. Sloan, Jr., president, devoted much space to it in his annual report, in which he outlined for the first time the actual amount of money paid by the corporation and employees into the various funds, such as the bonus plan and the savings and investment plans.

Under the bonus plan, Mr. Sloan stated, there were awarded during the year 1929 167,378 shares of common stock of the corporation to 2,840 employees for conspicuous service during the year. Under the terms of the bonus plan the stock allotted is purchased in the open market and the cost thereof charged against earnings. This stock has a current market valuation of approximately $8,000,000.

Under the employees' saving and investment plan, the sixth class, that of 1924, matured and 15,177 employes participated as follows: On account of their savings, $1,803,270; on account of interest at 6 per cent. on savings, $682,203, and on account of amount accumulated in the investment fund, representing accumulation on account of contributions made by the corporation five years ago (this amount is represented by 152,976 shares of common stock at market value at time of distribution), $6,195,528. This makes a total of $8,681,001.

An employee who paid $300 during the year 1924, received in January, 1930, on maturity, cash and securities having a market value of $1,447. This was made possible by the partnership interest of the employee, acquired through the investment of the corporation's contribution in common stock of the corporation.

In regard to the Managers' Securities Company, an association of executives for the purchase of General Motors stock, with the aid of the corporation, Mr. Sloan had the following to say:

"In view of the fact that this plan was inaugurated in 1923 and its progress has been dealt with in the

(Continued on page 12)

TODAY

Sparkse from Detroit.....Page 2
Driver training essential safety factor in truck fleet operation.....Page 3
Editorial: "Safety Education" Page 4
Calendar of coming events.Page 4
U. S. charts week's business progress.....Page 4
Production, engineering, factory Page 11
Financial news.....Page 12

MERCHANDISING

"Straight Sale Car Club," formed in New Orleans.....Page 3

WHOLESALE

Denver jobber operates own printing plant.....Page 7

REFERENCE TABLES

Major specifications, mechanical details of commercial cars Pages 8, 9, 10
Commercial car registrations Page 8

Chrysler Service Center Combines All N. Y. Divisions

NEW YORK, May 1—Announcement of Service Center, a new eight-story fireproof structure devoted exclusively to complete service for all Chrysler Motors products in New York city, has been made by Chrysler Motors and distributors of its products in the metropolitan area.

The building, covering an entire city block from 65th Street to 66th Street on the west side of West End Avenue, represents a unique merchandising service plan after car sales are made.

In this building, a corps of factory-trained experts is available for all types of service from the minor adjustment of a carburetor to the rebuilding of the entire car. It was designed to save the motorist time and money by the use of the latest machines, modern methods and an ideal floor layout. Machine tools and special equipment represent an investment that would have been considered adequate for a fair-sized factory a few years ago.

Factory standards for quality and precision are rigidly maintained. Only genuine parts and approved factory practices are used. Passenger and commercial car departments are entirely separate, the latter on a 24-hour schedule to meet the all-night requirements of commercial vehicles in New York. The location of the building is such that it can be reached conveniently from any part of the city.

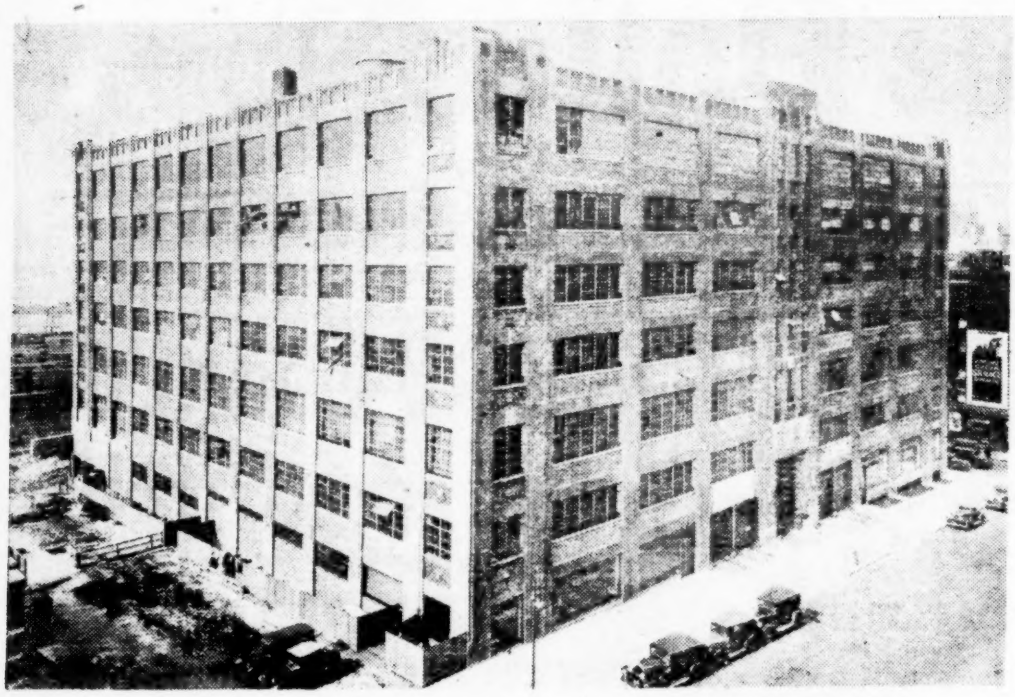
Each division of Chrysler Motors has its own entrance and quarters in the building in charge of its own trained attendants. Separate shop equipment and mechanical forces are maintained to provide prompt and expert attention. On the floor devoted to Chrysler service there are over 200 feet of work benches available in this shop alone.

Ten men are employed to meet incoming Chrysler cars, diagnose service needs and send them to the proper department. A minimum of waiting time is assured the owner, and when the work is started, the quickest service possible is guaranteed.

Located in this service center also are the general offices, service, parts and wholesale departments of Simons, Stewart & Foy, distributors in New York for Chrysler and Plymouth cars and Fargo commercial vehicles; Bishop, McCormick & Bishop, direct dealers for Dodge

(Continued on Page 2)

Chrysler's New York Service Center



IN THIS new modern fire-proof building owners of all Chrysler products in the Metropolitan area will find the last word in service efficiency and courtesy. Chrysler, Dodge, De Soto, Plymouth and Fargo each have their own separate part of the building where the utmost in individual service can be rendered

Chrysler Service Center Combines All N. Y. Divisions

(Continued from Page 1)

Brothers cars, Plymouth cars and Dodge trucks, buses and motor coaches, and Kilbourn Motors, Inc., dealers for De Soto and Plymouth cars in New York.

In announcing the opening of this service center, J. L. Kenyon, director of service for all divisions of Chrysler Motors, pointed out that such an investment was necessary to keep pace with the constant expansion of Chrysler business in New York and to provide unmatched service facilities.

"All repairs are done on the flat rate basis," said Mr. Kenyon, "and the owner knows immediately what the job will cost and when he is going to get it. Furthermore, he knows that the job will be done correctly, because all work is guaranteed. If workmanship should prove defective, the mechanic making the repair will be compelled to do it over again at his own expense. Pay is given on the basis of rejections as well as acceptances, so that the owner is fully protected.

"For size, equipment, convenience and economical handling of service problems, this structure is unsurpassed anywhere in the world. It assures present and future owners of Chrysler-built products the complete and contralized service facilities that they have a right to expect when they purchase their cars."

GIGANTIC AIR LINERS MOVED INTO MADISON SQUARE GARDEN FOR SHOW

New York, May 1.—The New York Air Show was unofficially begun this morning when the first of the gigantic air liners to be displayed was moved into Madison Square Garden. The air show will officially open to the public Saturday and continue through May 11. However, the next three days will be spent in assembling the fifty-five planes and ninety other exhibits to be seen at the event.

Seven trucks were needed to cart the large fourteen-passenger twin-hulled Savoia - Marchetti Flying Boat here from Port Washington, L. I. The giant Fokker F-32, largest land plane built in the United States, was trucked to the Garden from Teterboro, N. J. From Valley Stream, L. I., came the twenty-one-passenger Curtiss Condor. The large Sikorsky, twelve-passenger plane, was brought to New York from Bridegport, Conn., during the day and the Consolidated Commodore flying boat was brought by truck from Buffalo, N. Y.

Following a seven-hour flight from Detroit, Mich., to Roosevelt Field, L. I., the tri-motored Ford was transported by truck to the Garden.

NEW DIRECTORS FILE ANSWER IN MOON SUIT

Wilmington, Del., May 1.—The board of directors of Moon Motor Car Company filed answer in Chancery Court here to the suit brought by stockholders contesting the validity of the April 7 special meeting of stockholders at which eight new directors were elected.

The seven directors comprising the original board admitted the allegation of the bill of complaint which declared the meeting was illegal and that the eight new directors elected are not entitled to hold office. The eight new directors filed an answer contending the meeting was legal.

N. A. C. C. WINS AWARD FOR GROUP SERVICE

(Continued from Page 1)

Walter Gill Scott, Leonard P. Ayres and Walter T. Strong.

In announcing the award Secretary Lamont said: "This award was made for original and outstanding service to the public and represents an advance over most trade association work. The achievement is of paramount importance because of the magnitude of the automobile industry and the strength of the association representing it. In its unanimous decision this committee singled out this work as the most remarkable in all trade association history."

WESTERN TRANSIT ADDS TO TERRITORY IN BIG PROGRAM OF EXPANSION

Duluth, Minn., May 1.—A gigantic expansion program now under way which is expected to result in the shipment by water on the Great Lakes of a larger number of automobiles and trucks in 1930 has been announced at the headquarters of the Western Transit Company.

The most important part of the expansion program is the starting of operations in Green Bay, Wis., to serve seven states which have been added to the operations of the Western Transit Company. A. J. Delaney has been appointed general agent at Green Bay. About 10,000 automobiles and trucks are expected to be shipped into Green Bay during the navigation season of 1930 for reshipment to dealers and distributors by rail and drive-away. The following states which have been added to the operations of the Western Transit Company will be served from Green Bay: Iowa, Nebraska, South Dakota, Wyoming, Colorado, Kansas, Missouri and a portion of Wisconsin.

The Duluth dock and operations will continue as in the past to serve Minnesota, North Dakota, Montana, Idaho, Oregon, Washington and the northern portion of Wisconsin. The company expects to ship 15,000 automobiles and trucks into Duluth for reshipment by rail and drive-away in 1930.

To care for the increased business as a result of this expansion program the Western Transit Company will increase the number of boats available for its service from forty-eight to sixty, each with a capacity of from 100 to 350 automobiles and trucks.

PARTS AND ACCESSORY MAKERS REPORT GAIN

(Continued from Page 1)

compared with 141 in February, 135 in January and 275 in March, 1929.

Shipments to the trade by makers of service parts were 139 per cent. of the 1925 base index, as compared with 131 in February, 137 in January and 148 in March last year.

Accessory shipments to the trade in March were 67 per cent. of January, 1925, as compared with 66 in February, 79 in January and 85 in March last year.

Service equipment shipments, that is, repair shop machinery and tools, in March were 175 per cent. of the 1925 base, as compared with 151 in February, 135 in January and 224 in March a year ago.

BOTH VIRGINIAS SETTLE DEALER LICENSE DISPUTE

Richmond, Va., May 1 (UTPS).—Virginia and West Virginia motor vehicle authorities have reached an agreement as to the use of dealers' automobile licenses which is expected to settle the differences which arose between them some weeks ago when T. McCall Frazier, Virginia motor vehicle director, went to West Virginia for a conference.

It has been agreed that only West Virginia dealers and their agents may use dealers' plates while driving in Virginia, and that the same rule will apply to Virginia cars operating in West Virginia, although the State permits the use of plates on private cars for ten days after their purchase.

PRODUCTION IN CANADA DURING MARCH INCREASES

Toronto, Ont., May 1 (UTPS).—During March a brisk upturn was enjoyed by the Canadian automotive industry. Production of automobiles in Canada during March numbered 20,730 cars, the highest number reported for any month of the present year to date, being almost double the output of 10,388 cars in January and 34 per cent. greater than the 15,548 cars produced in February.

The March output, however, was only about one-half the total of 40,621 cars made in the corresponding month of last year. The rate of production in March of this year, though, was 669 cars per day, an increase of 114 cars a day over the daily average of 555 cars in February.

SPARKS from DETROIT

A Short-Cut Around

* * *

Trackless Trolleys for Detroit

* * *

Motor Laws in Detroit

Fred Kingsbury—Detroit Editor

PAUL SEILER, president of General Motors Truck Company, Pontiac, Mich., has an efficient organization. Recently the company took an order from an Eastern operator for 300 costly buses. A few days ago fifteen of these vehicles started for their destination after it was discovered that, by driving the buses over the Ambassador Bridge and across Canada, a saving of 100 miles of the distance to New England could be made. The buses are going into service immediately and others will follow every day until the order has been filled.

* * *

DEL SMITH, general manager of the Detroit Street Railways, says this city will soon have its first trackless trolleys in operation. The new operation will be three miles in length on Plymouth Road. The Twin Coach Company of Kent, O., was the lowest bidder on the "trackless trolleys."

* * *

PROF. E. L. ERIKSON headed eighty-six members of the senior civil engineering class of Purdue University on a visit to Detroit the other day. The class spent considerable time at the Graham-Paige plant, especially in the engineering building, where it was greatly interested in tests and testing machinery. They also spent a great deal of time studying production methods at the factory.

* * *

ENGINEERS employed by the Chrysler Corporation have an organization all their own, known as the Chrysler Engineers' Club, in which the members all show deep interest. The annual meeting was held the other night in the Engineering Building at Highland Park. These officers were elected for the year: H. T. Woolson, chief engineer of all divisions, president, succeeding Allan B. Couture; George B. Allen, director of engineering, Dodge division, vice-president, succeeding C. E. Davy; H. C. Kelly, standards engineer, secretary-treasurer, succeeding, W. H. McDuff; G. W. Hubbard, chief draftsman, Hughland Park, member-at-large, succeeding H. E. Maynard.

* * *

FOR some time past, Detroit has been having considerable trouble with negligent homicide cases or other offense growing out of accidents, with the result that more than 100 motorists are awaiting trial. This is the report of Inspector William Black, head of the police accident investigation bureau.

These cases have been accumulating since April 18, 1929, when Judge W. McKay Skillman ruled that a charge of negligent homicide was unconstitutional when applied to motorists whose automobiles were involved in fatal accidents. Recently the state Supreme Court held that the charge was constitutional.

It seems as though everything pertaining to automobiles and owners of motor cars, as far as laws are concerned, are made just as difficult as possible in Detroit, as well as elsewhere.

* * *

CHARLES H. McMAHON, vice-president in charge of advertising of the First National Bank, has just been elected president of the Adcraft Club of Detroit, succeeding William R. Ewald of the Campbell-Ewald Company. H. J. C. Henderson, manager of sales and advertising of the Fisher Body Company, was elected first vice-president.

* * *

J. LEE BARRETT of Detroit, says that there has been a total of 1,607 miles of highway completed in Michigan under the Federal-aid system of 5,216 miles.

* * *

The legality of the Detroit police system of impounding parked automobiles, which has resulted in 90,000 motor cars being towed to police pounds in the last eight months, is threatened in this city in a suit filed in court by Mandell Bernstein, an attorney. He charges that any impounding of an automobile, without "due process of law" is unconstitutional.

Mr. Bernstein says that his own motor car was twice impounded because of parking violations and that both times he was required to pay $3 for its recovery. For each seizure of the automobile he seeks the return of the $3 fee and damages of $200.

"Straight Sale Car Club" Formed in New Orleans

Chevrolet Dealer Has Partially Solved Used Car Problem By Special Bonuses For New Car Sales Without Trade-In.

By FRED CUMBUS

AN effort to at least partially solve the used car problem has been launched by the New Orleans Chevrolet Sales Company of New Orleans through the organization among its salesmen of a "Straight Sale Car Club."

This organization already has proven itself effective to a good extent during the month of its organization in reducing the number of used cars taken in by this company. Thirty straight sales were made the first month.

Through this club, the idea of which has been worked to a limited extent by dealers throughout the country, the company of New Orleans seeks not only to avoid accepting an old car as part payment but to convince car owners of the value of retaining their cars for special uses and thus get the full value of their investment.

Where trades are necessary the salesmen dispose of the used cars before delivery of the new ones, so that the old vehicles are never accepted by the dealer.

* * *

FOR this special bonuses are paid by the company and the club members are accorded privileges not permitted others. In addition, it enables the dealer to discover the "go-getters" of his sales force.

Nine salesmen of the company's organization were eligible for membership in the club when the end of a trial month was reached, following announcement to the salesmen that the club would be formed. Each of these had sold three or more cars without any traded-in used car, several had sold as many as six, while the sales manager, B. C. Davis, sold eight.

Club members wear a button with a likeness of George W. Stem, president of the company, and the name of the company and the club upon it.

* * *

"THE purpose and aim of this club is to promote and increase interest among automobile salesmen in working prospects who do not at present own a car, or new business with trades not being considered," Mr. Stem said in discussing his club idea.

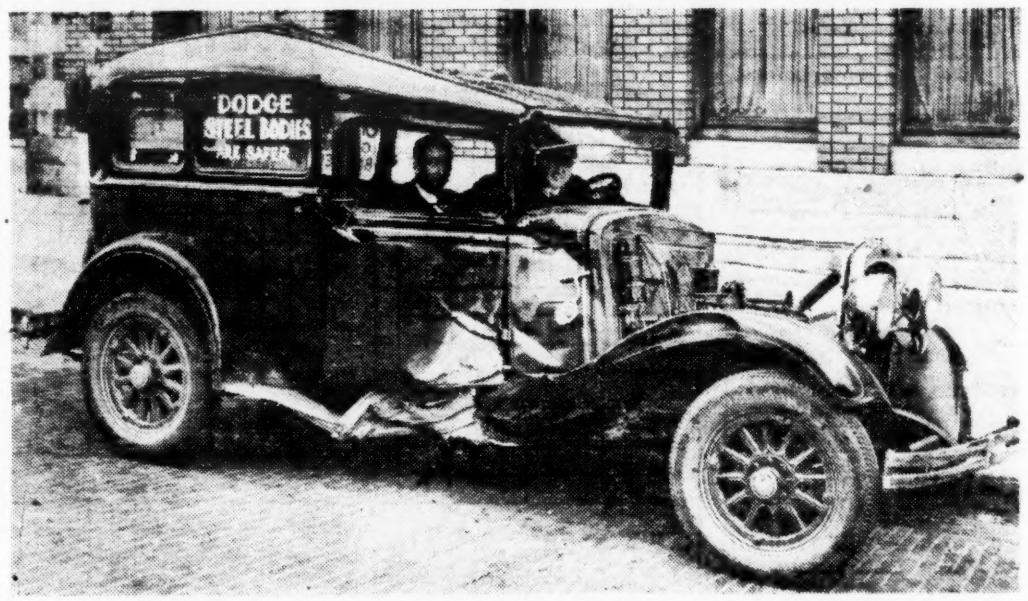
"In addition to this phase of new business salesman endeavor to sell the used car before delivery of the new one, or use their influence with the prospect, urging him to continue using his old car for general purposes and ultimately use up his entire investment, thus avoiding an apparent loss in considering trading.

"Few owners consider conditioning costs, overhead and selling expense, even if their traded-in cars are offered for sale 'as is.'

* * *

"THE principal incentive for salesmen in the Straight Sale Car Club is, of course, the extra bonus to salesmen when they have reached the number of straight sales entitling them to permanent membership in the club. This is the sale of as many cars during two succeeding months as those reached during the first month. Thus, if a salesman made three straight sales during the month, entitling him to membership, he must sell as many during the two succeeding months on the same basis."

Turns Disaster Into Profits



J. O. FISHER, Dodge dealer at Everett, Wash., allowed $350 on the wrecked car shown above, and says that he wouldn't take $1,000 cash for it. Already it has had tremendous drawing powers and many sales of new cars have been traced directly to this unique method of advertising.

The car, with its Budd all-steel body, crashed, and here is what the driver wrote Mr. Fisher:

Mr. J. O. Fisher,
Everett, Wash.
Dear Sir:

As per your request, we are giving you the details of this wreck:

Rounding a curve, meeting another car with bright headlights blinded me, causing me to leave the road striking a Puget Sound Power Light post, which broke off about eighteen inches above the ground, the pole falling across the top of the car.

There were three of us in the car at the time of the accident, and no one was hurt except for minor bruises.

It is our opinion that the sturdy construction of the body of this sedan no doubt saved us from serious injury, or possible our lives.

This is one of the reasons why I am trading it to you for another steel body sedan.

Very truly yours,
Frank J. Doviller,
LaConner, Wash.

In the picture shown above Mr. Fisher is at the wheel. The car can do 60 miles an hour in its present condition. The brakes are perfect. Nothing was done to it after the accident other than to install a new battery.

STRESS SERVICE IN USED CAR SALE CAMPAIGN

By JAMES R. LOWELL

LINCOLN automobile dealers started April 6 closing their places of business on Sundays, and for two days prior to the first closed Sunday they ran cooperative advertising in newspapers as part of an intensive campaign to keep used car buyers from going to used-car dealers on Sunday, and to induce them to come to the new car dealers on week days instead.

Notice that the close-Sunday policy has been adopted was sent to the city council in the form of an agreement signed by about forty dealers of the city and suburbs. The pact covers every form of business conducted by the dealers, including the sale of new and used cars. The agreement is the result of the voluntary acts of the dealers who signed the statement and was initiated by them, although the motor trades subdivision of the Lincoln chamber of commerce cooperated in organizing the dealers to form the agreement.

In adopting this policy the Lincoln dealers are going on the belief that salesmen and other employees will be better satisfied with their work and will work more efficiently than if they were to work seven days of the week. The dealers will be open evenings during the week, however.

The slogan of the co-operative advertising is "Buy Your Used Car From a New Car Dealer." The new car dealers go on to say: "When in the market for a good used car, stop and carefully consider several important points before making your investment:

1. Is the car a good investment?
2. Is the dealer dependable?
3. Does the dealer have ability and facility to give service?
4. Will dealer stand behind car?

"Lincoln's new car dealers are sound business men whose word can be depended upon. They have certain factory connections, which guide them in the proper method of conditioning and selling used cars. When a new car dealer sells you a used car, he is selling more than one car—he is selling you his reputation with the hopes that you will eventually become a new car purchaser from him.

"You can buy better used cars from a new car dealer—at most reasonable prices."

Driver Training Essential Safety Factor in Truck Fleet Operation

THE following article is published through the courtesy of the National Automobile Chamber of Commerce, and is incorporated by that organization in a second pamphlet being circulated by its motor truck division in furtherance of its "Better Driving" campaign.

New York, May 1.—Operators of exceedingly large fleets might seem to have greater incentive for and some advantage in carrying on a well-developed system for training drivers. On the other hand, those handling modest-sized fleets have no small advantage, because of their ability to give more attention to individual employees. The fact that this is done in the driver training work of Roemer Brothers Trucking Company, Inc., of Newark N. J., probably more than anything else accounts for its success.

From a very small beginning ten years ago, the two Roemer brothers, Charles T. and Clarence J., have built up a business that is probably the largest of its kind in their vicinityg. They specialize in handling coke and lumber, and in that way keep the year around demand for their services nearly uniform. They now operate about thirty trucks and eighteen trailers, with carrying capacities ranging from seven to fifteen tons. With a driver and a helper to each unit the entire fleet crew is not so numerous as to make it difficult for the two brothers to exercise close supervision over each man in their employ.

Between them they have divided the responsibility. Charles Roemer has the field or outside part of the business and Clarence the office or inside work. It was from the latter that the following interesting details of their training procedure were obtained.

Let it be emphasized that training as discussed here does not refer so much to the instruction of new employes as to the continuous keeping of the entire staff up to their best performance.

The beginners' instructions are principally in the hands of Charles Roemer. The men are first put on the trucks as helpers and in this way gain considerable experience from the drivers and become familiar with the routes, paper work, etc., and from observation they learn quite a little regarding the care and driving of the vehicles. When vacancies are created the drivers are recruited from the helpers and are given the personal attention of Charles Roemer until they are competent to handle a truck alone.

A BONUS FOR EACH OF THREE CLEAR RECORDS

All of the time the drivers' records are under the watchful eye of Clarence Roemer. The help being organized, the wages are union scale, but in addition the men receive bonuses each month, one for accident free record, one for a record with no idle time and one for a record with no complaints from customers.

These records are kept in the office and in graphical form are posted on a bulletin board in the central garage, so that each man knows how he stands in comparison with the others. There is the element of pride, therefore, to encourage their keeping a clear record, as well as the monetary reward expected at the end of the month.

Liability, property damage and compensation insurance is carried by the firm for all the drivers. They are held personally responsible, however, for damages they do in the course of their work, such as breaking sidewalks, windows and similar mishaps.

Every accident in which they figure is recorded, whether or not they are at fault, but their bonus is not affected unless they were to blame.

POSTERS, LESSONS AND MERIT CARDS

There are three additional ways in which safety is promoted. Safety posters are purchased and displayed on a blackboard, with some striking verse or slogan printed in colored chalk to emphasize the lesson of the poster. These are changed weekly and so do not escape notice, as they would if too long displayed. The board is on the wall where every truck has to pass it while going in and out of the garage.

The company also subscribes to a series of twelve safety lessons. Each new driver receives one a month until he has had them all. The title of the series is "The Safe Driver," and it is a part of a complete service on public safety. Each lesson takes up something in connection with the truck itself and something in connection with driving performance on the highways or in traffic, calling attention to the hazards and how to guard against them.

The third thing that is done to keep the men constantly reminded to be careful is to give them "Certificate of Merit" cards supplied by an insurance company. A pink card is given to each driver who, for a period of three months, has had no accident of any kind, a blue card for six months perfect score and a white card when he has gone through the entire year without having any sort of accident. An additional bonus is given for a year's perfect record and the men are given a bronze plate to attach to the trucks they drive which the company has had designed especially for its own use.

Having these cards in their pockets or plates on their trucks, drivers are at some advantage if they have an accident where the fault is in question, or if they break some traffic regulations unwittingly. If the police officer happens to see the card or plate while the driver is producing his driver's license, the officer will likely be less inclined to hastily decide the driver was careless.

One of the finest things done for all of the company's employees is in the nature of general welfare work and does not especially pertain to driver training or safety work. It costs the company considerable, but pays wonderful dividends in loyalty to the organization. This is the holding of meetings, usually once a month during the fall, winter and spring, where they are given talks on various subjects relating to their work and have opportunity to express their own opinions or ask questions. These meetings conclude with some form of entertainment or dance and refreshments, so that the social side is not neglected and they are treated as one large family. In place of these meetings in the summer there are outings, to which they are all invited with their families, buses being provided to some shore resort where there is fishing, bathing and a good dinner.

FEW ACCIDENTS AND LOW INSURANCE

The Roemer Brothers driver training system, as at present developed, has not been in use long enough to show its accomplishment in accident reduction by exact figures, for accident records have not been kept for years earlier than 1929. In that year the company had a total of 56 accidents of all kinds, irrespective of seriousness or who was at fault (only 39 of these were blamable to the drivers), and its equipment during the year traveled a total of 397,768 truck miles.

This makes their record only one truck accident to every 7,103 truck miles operated, and only 1 accident in 10,200 truck miles for which the drivers were responsible. The average load is about 10 tons (most of the units are tractor-trailer combinations), so that over 1,000,000 ton miles of haulage was done per accident for which responsibility attached to the company. Serious accidents have been so few that the company enjoys a very low insurance rate.

Such a creditable showing testifies to the effectiveness of the Roemer Brothers driver handling program and may well commend any or all of its features to other fleet owners.

MONTHLY NEWS LETTER FOUND EFFECTICE BY VANCOUVER DEALER

By F. H. FULLERTON

AN extremely novel and original type of merchandising of new and used cars has been adopted by Monarch Motors, Ltd., 650 Burrard St., Vancouver, B. C.

This scheme is the brain-child of Frank Turnley, salesman with the firm, and takes the form of a monthly news letter, known as the "Turnley Motorgram."

This one or two-leaf publication is sent out to old customers and future prospects every month, the object being to make friends with the buying public in the vital yet impersonal way. The news letters are not straight advertising, but are designed in the form of semi-monthly reviews of the motor business, keeping the reader posted on its plans and new creations, introducing a little fun and entertainment, and at the same time always striving to drive home each month a few advertising arguments for the Whippet, Willys and Willys-Knight cars handled by the firm.

Mr. Turnley was at one time sales-manager for one of the largest oil companies in the Western states, but resigned this position to turn to the newspaper field.

The Turnley Motorgram is sent out with the heading "Published by Francis R. Turnley, Monarch Motors, Limited, 650 Burrard St., Vancouver, B. C. The Royal House of Satisfied Customers." It will thus be seen that while the advertising is used solely to draw attention to sales which Mr. Turnley hopes to make, at the same time, general publicity is given to the entire firm of Monarch Motors. Occasionally, accompanying the Motorgram is a letter mentioning a number of new or used cars considered as good buys. These letters take the form of a personal note, bearing the written signature of Mr. Turnley.

Automotive Daily News

"Of, By and For the Entire Automotive Industry"

Published Every Day Except Sunday and Monday by
AUTOMOTIVE DAILY NEWS PUBLISHING CORPORATION,
350 Hudson St., New York, N. Y.
O. J. Elder, President. H. A. Tarantous, Vice-President. Alexander Johnston, Secretary.

Entered as second-class matter August 27, 1925, at the post office at New York, N. Y., under the Act of March 3, 1879.

Circulation—Net paid Average over 10,000 daily guaranteed.
Member A. B. C.

FRIDAY, MAY 2, 1930

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EDITORIAL DEPARTMENT

350 Hudson St., New York, N. Y. Telephone CAN al 1000
Alexander Johnston, Editor. William C. Callahan, News Editor.
Detroit Bureau.—Fred Kingsbury, Editor, 427-8 Fisher Building, Detroit, Mich., phone Empire 3500. Contributing Editor, John C. Wetmore.
Mail subscriptions to CIRCULATION DEPARTMENT—C. H. Wilson, Manager.
1926 Broadway, New York, N. Y. Telephone TRAfalgar 4500
Subscription Rates—One year, $12.00; two years, $20.00, for United States and Canada. To Foreign Countries—One year, $15.00; two years, $26.00. Single copies, 10 cents.

Safety Education

INTENSIVE education of school children in the meaning of safety under modern traffic conditions will produce results. A concrete instance of this has recently come to our attention in the casualty figures for the city of Baltimore, Maryland, for the year 1929.

Baltimore has had a local Safety Council for seven years and this organization has been conducting an educational campaign in the schools ever since it began its service. This campaign has grown in intensity and naturally in effectiveness. The proof of this is to be found in the accident figures for the year 1929. In the year 1928 thirty-one children of school age were killed in the city's streets. In 1929, despite the fact that the number of motor vehicles had increased 14,500 and that more children were going to school, the number of street fatalities among those of school age was reduced to twenty-two.

This safety problem of ours is a difficult one, but it is not insoluble. Education, education and more education must be the foundation of our campaign for safety. This education must begin in the schools, where it is happily already making headway. It must be extended to include every man and woman in the country. No class of our people is exempt from responsibility for accidents. Many of the sufferers are careless pedestrians. The people who walk must be taught to protect themselves by intuitive care at all times in the conditions obtaining in modern traffic. As long as traffic, vehicular and pedestrian, proceeds on the same level and crosses at intervals, we shall continue to have an accident problem and unfortunately that looks as if it would continue during our lives and our great grandchildren's. However, by education and implanting the need for constant care in all our people we can minimize accidents.

We have left until last the education that is needed by a certain class of motor vehicle operator. Authorities agree that from 90 to 95 per cent. of all motor vehicle drivers are careful and law-abiding. The remaining fraction are not. They are careless and temperamentally unfitted to give due regard for the rights and safety of other users of the streets and highways. This fraction needs education even more than the children and adult pedestrians. Perhaps the education should include an infusion of punitive measures relentlessly carried out.

Quality Wins

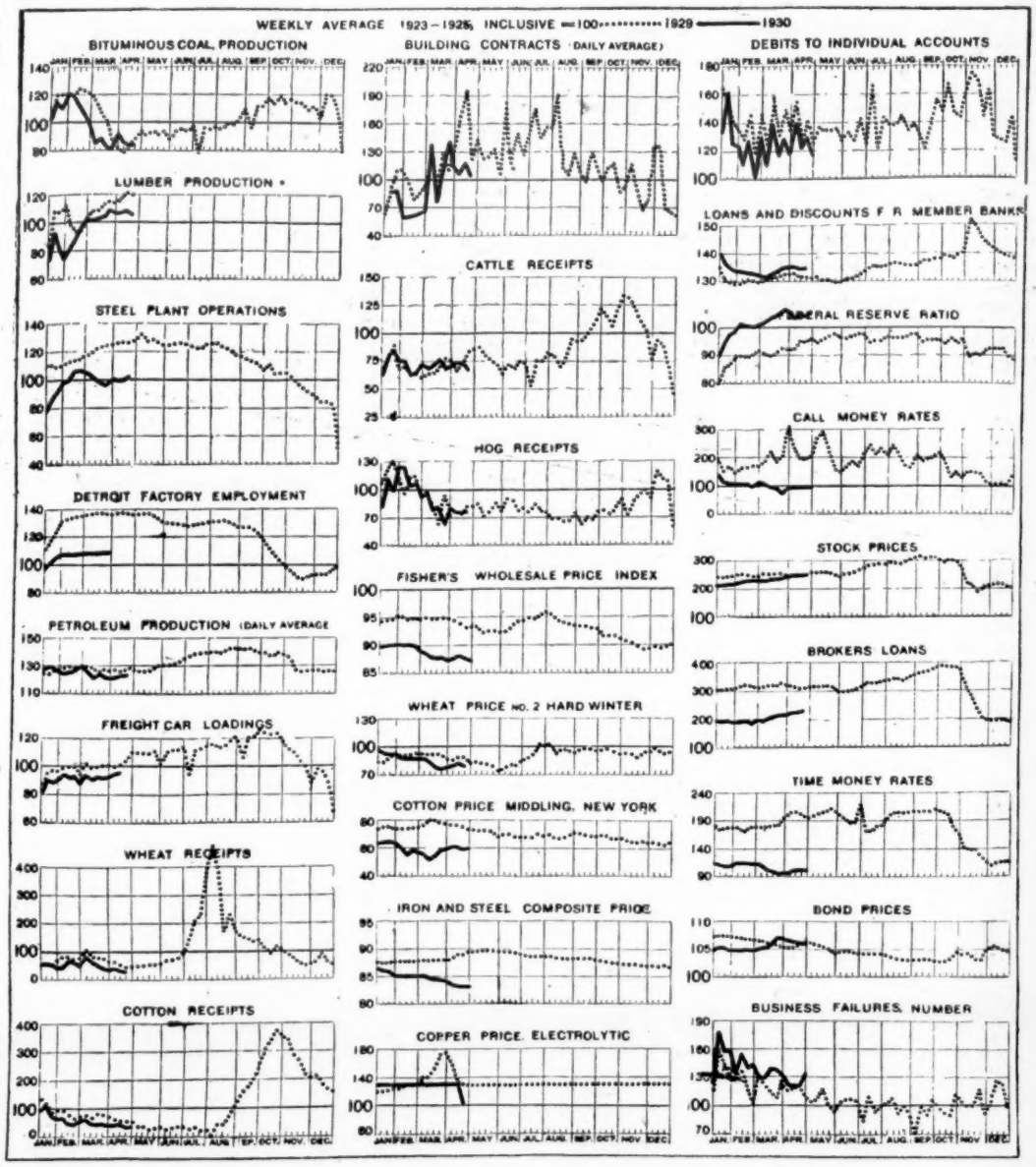
IN a recent issue of Automotive Daily News, we published the results of a survey made by our correspondents in several Pacific Coast cities. One fact stands out above all others in this survey and that is that the service shops which have modern equipment and efficient methods of doing their jobs are running the others out of business.

A great change has gradually come over the attitude of automotive merchants toward the service end of their businesses. Not very long ago a lot of dealers, for instance, looked upon service as a necessary evil; something which their position compelled them to furnish, but which they would be glad to get rid of if they dared. Many dealers frankly said that if they could make their service departments break even, they would be delighted.

Today there are very few dealers who expect new car sales to carry a deficit in the service department. They have learned that by installing modern equipment and training men to operate at maximum efficiency they can make the shop an asset to the business, not merely an expensive bit of good will.

The sooner every dealer realizes that he is selling transportation and not merely new cars, the better for all of us. Transportation includes everything necessary to keep his customers moving from place to place as they will in their own highway vehicles. It includes not only new cars but used cars, service, parts, accessories and what not.

U. S. Charts Week's Business Progress



Above is reproduced this week's chart of business trends issued yesterday by the Department of Commerce at Washington. These charts are now appearing regularly in Automotive Daily News.

DIAMOND T PRESIDENT URGES ACTION AGAINST GASOLINE TAX ABUSES

Chicago, May 1.—More concerted action in various states against what he termed two specific gasoline tax abuses is urged by C. A. Tilt, president of the Diamond T Motor Car Company. One of the evils named by Mr. Tilt is the exorbitant tax, averaging around 4 cents a gallon and running as high as 6 cents in several states. The other is the policy often pursued of diverting the money received from its original object to more general purposes. In addition to declaring that the amount of the gas tax should be lowered in most states, the Diamond T chief maintains that the rate should be standardized.

Further discussing legislative matters as they pertain to motor trucks, Mr. Tilt pointed out two tendencies in the right direction—namely, the raising of speed limits, especially when pneumatic tires are used, and the allowing of considerably heavier loads for six-wheel trucks than for four-wheelers.

SOUNDS WARNING AGAINST "GYP" ASSOCIATIONS

Philadelphia, May 1.—Anticipating the season when car owners are preparing for frequent motor trips, a swarm of gyp operators for concerns masquerading as motor clubs are preparing for a rich harvest from motorists who join without investigation, according to Ernest W. Tallman, general manager of the Automobile Club of Philadelphia, which is affiliated with the American Automobile Association.

Mr. Tallman pointed out that every section of the country is confronted with these illicit operations, despite the activities of Federal agencies and better business bureaus. Aside from the fleecing of motorists through the sale of these worthless service contracts, said the A. A. A. Club executive, "these gyp companies impose a heavy toll on garages, service stations, filling stations, hotels and others catering to car owners."

WAYNE HEARNE PREDICTS BETTER AUTOMOBILE YEAR

Forth Worth, Tex., May 1.—Here for the annual convention of the Texas Automotive Dealers Association, Wayne Hearne, Chicago merchandising counseler, declared the industry had been suffering from indigestion, no worse in 1907 or 1920 than in 1929, and predicted that 1930 would be a better automobile year than the average of the last decade.

He said some of the states with the lowest buying power are high in the automobile buying columns, because automobile ownership depends more upon paved highways than upon per capita wealth. The people are going to have their cars, Hearne said, but the factories and dealers must get together on what is a normal supply.

JARRARD CONCLUDING TOUR OF COUNTRY

Fargo, N. D., May 1.—Thomas E. Jarrard, Marmon general sales director, spoke here yesterday to more than 125 Kiwanis Club members and Marmon dealers from Fargo and a large surrounding territory in what was one of the last luncheon meetings held by the Marmon official on a three months' tour of the United States and Canada. Mr. Jarrard left shortly after the meeting to visit Marmon distributors in Minot, Bismarck and Jamestown. He will arrive back at the Marmon factory Monday, May 5.

McALEER MFG. CO. SALES UP IN FIRST QUARTER

Detroit, May 1.—The McAleer Manufacturing Company, this city, which supplies a majority of all automobile body builders and car manufacturers of the country with polishing products, enjoyed during the first quarter of 1930 a volume of business equal to 60 per cent. of the entire output for 1929, according to C. H. McAleer, president of the company.

COMING EVENTS

APRIL

28-May 3—**Henderson, N. C.** Automobile Show.

MAY

1- 3—**Chicago, Ill.** American Gear Manufacturers' Association annual meeting.
1-10—**Melbourne, Australia.** International Motor Show.
8—**New York.** Society of Automotive Engineers, aeronautic meeting.
23-27—**Atlantic City, N. J.** American Society for Testing Materials annual meeting.
27-29—**Washington, D. C.** National Conference on Street and Highway Safety.
25-29—**French Lick Springs, Ind.** Society of Automotive Engineers' summer meeting.
30—**Indianapolis, Ind.** Automobile Race.

JUNE

2-12—**Paris, France.** Automobile Salon.
9-12—**Detroit, Mich.** American Society of Mechanical Engineers' semi-annual meeting.
16-25—**London, England.** Olympia Motor Show.
23-26—**San Francisco, Cal.** Meeting American Electric Railway Association.
29-July 13—**Posen, Poland.** International Motor and Transport Show.

SEPTEMBER

29-Oct. 4—**Pittsburgh, Pa.** National Safety Council Annual Safety Congress.

OCTOBER

2-12—**Paris, France.** Automobile Salon.
6-11—**Washington, D. C.** Sixth International Road Congress.
6-11—**Washington, D. C.** American Road-builders' Association Convention.
16-25—**London, England.** Olympia Motor Show.

NOVEMBER

6-16—**Berlin, Germany.** International Automobile Show.
8-15—**Chicago, Ill.** Automobile Salon at Drake Hotel.
10-14—**Cleveland, O.** Motor and Equipment Association Show.
17-22—**Cleveland, O.** National Standard Parts Association Show.
30-Dec. 6—**New York.** Automobile Salon at Hotel Commodore.

DECEMBER

6-17—**Brussels, Belgium.** Automobile Exhibition.

THE S. A. E. SUMMER MEETING
and the
SUMMER MEETING ISSUES OF
Automotive Daily News
May 26–27–28–29

ENGINEERS—PRODUCTION MEN—Other factory executives. Whether they attend the meeting or not will receive a copy of the S. A. E. Summer Meeting Issues of Automotive Daily News

EDITORIAL COVERAGE

The issues will cover the news of the day from every branch of the industry; all important papers to be presented will be carried, and features of interest to every one in every branch will be published in these issues.

ADVERTISING COPY WILL BE SEEN

Your advertising copy will not be buried, because visibility of copy is one of the outstanding features of Automotive Daily News.

Your advertising will be read at a time when interest in all engineering and manufacturing subjects will be at fever heat. The industry is never too busy to read Automotive Daily News. It doesn't take much time to read it, yet it gives all the news and features that any influential man is interested in.

At no time and in no other publication can an advertiser's copy obtain such prominence and such thorough reading.

PRODUCTION MEN, TOO

These special issues of Automotive Daily News will reach important engineers, production men, factory executives, the best rated vehicle merchants and jobbers of accessories, parts and shop equipment.

BONUS CIRCULATION

The regular net paid circulation of Automotive Daily News is alone sufficient to bring the advertiser returns of exceptional nature, and with the bonus circulation covering the S. A. E. Summer Meeting, still greater value is obtainable.

Every man registered at the meeting will receive a copy on the day of publication.

Full Page, 1,000 agate lines One column, 200 agate lines

FIVE COLUMNS TO THE PAGE

Rate 35c per line ($350 per page) except on time or space contracts, when rates are considerably lower.

Automotive Daily News

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Chicago, Ill.

DETROIT OFFICE
Geo. M. Slocum, Mgr.
Fisher Building
Detroit, Mich.

EASTERN OFFICE
J. Edward Schipper, Mgr.
Graybar Building
New York City

BOSTON OFFICE
Metz B. Hayes, Mgr.
Little Building
Boston, Mass.

PACIFIC COAST
Blanchard, Nichols & Coleman
Am. Nat. Bank Building
San Francisco, Cal.

Chicago New Car Sales for April Highest Since Aug., '29

CHICAGO, May 1. — Automobile distributors and dealers in this city report that new car sales in April were greater than in any single month since last August and anticipate even greater business in May.

While it had been expected that new car sales would increase in volume during April, this rise was in the face of adverse weather conditions.

With only an occasional exception, the sales volume of any one company does not approximate the sales volume of the first four months of 1929. However, the total Cook county sales for the first four months of 1930 are not expected to be more than 6 per cent. below those of a year ago. Two makers of low-priced cars thus far have accounted for slightly more than 50 per cent. of the total volume, one maker doing 36 per cent.

In the first four months of 1929 there were 40,452 new cars registered in Cook county. Up to April 22 there were 33,451 registrations. On the basis of April sales so far, at least another 3,500 cars will be registered in the last eight days of the month, bringing the 1930 total to approximately 38,000 units.

During the first seven days of April, there were only 1,650 new cars registered. The next five days saw another 2,501 added, while in the ten days ending April 22 there were 4,290 registrations. Many sales made in these ten days will go in the final registrations. If the conservative last eight-day estimate of 3,500 units is added to the 8,441 April registrations, there will have been approximately 12,000 April sales in Cook county. This compares with 14,699 in 1929.

The monthly Cook county registrations since last August have been:

September, 8,208; October, 6,483; November, 3,353; December, 1,968; January, 5,262; February, 6,274, and March, 10,747.

Included in the registrations since the first of the year are the majority of the 1929 models held over as a result of last year's surplus production. This means that the 1929 overproduction so many pessimists talk about has been practically absorbed in Cook county.

Important distributors and dealers are enthusiastic over the upward trend in sales and the heightened interest. Virtually every large organization reports an unusual number of old-car appraisals which officials regard as an indication of a "break" in the deferred market. They logically infer that when a motorist begins to seek appraisals he is in line for a new automobile.

The used car situation in Chicago, which handicapped many dealers during the first quarter of 1930, in many cases is now in even a better condition than it was a year ago.

Several veterans are expecting this buying trend to continue working up to a June high level. Others are counting on May to be the biggest month in a year. All are certain that business, in so far as Chicago and automobiles are concerned, is well along on a consistent upward climb.

ILLINOIS TRUCK OWNERS ORGANIZE ASSOCIATION

Chicago, May 1.—Organization of the Central Motor Freight Association, whose object is the protection of commercial hauling interests on the highways, is just announced, following a meeting here of 200 truck operators several days ago. On the one hand the association will oppose the upward trend in taxation and regulation, and on the other it will enlist public good will by correcting faults among drivers in the handling of their trucks.

Referring to increased expenses in truck operation, a statement by the association points out that they are due to the fact that "the public is hostile to the motor truck." It declares that higher taxation and more legislation are further unfair because in the end the consumer of products carried by track ultimately pays the additional freight charge which results.

COMBINE BUS LINES

Union City, N. J. May 1.—The Weehawken and Union City bus lines have been combined to give through service between the West Shore Ferry, Weehawken and the 14th Street Ferry, Hoboken, beginning April 7, Public Service announces. The merged line is known as the Union City bus line, route No. 20, and in addition to giving through service between these two ferries, will also be routed so as to provide direct bus service to and from the shopping district along Summit Avenue, Union City.

TO REPLACE EQUIPMENT

Paterson, N. J. May 1.—It was reported today that the Public Service Co-ordinated Transport will replace all buses on the Passaic-Paterson (74) line with new de luxe buses early in July, and that the present vehicles will be used on the Lodi route. The new buses will seat forty passengers comfortably and will have room for a total of sixty passengers during rush hours. Similar buses are expected to be installed soon thereafter on the Passaic-Newark route.

Cumulative New Commercial Car Registration Table, March, 1930

Returns for today: Alabama, Maryland, Michigan, Nebraska, Nevada and Pennsylvania

Some of this data has been published previously, but it is give n here complete for the convenience of our subscribers.

Figures in this table are from R. L. Polk & Co. of Detroit, with the exception of Illinois, which are supplied by the Robinso n Advertising Service, Springfield, Ill., and New Jersey, which are furnished by the New Jersey Motor List Co., New Car Division, Trenton, N. J. Readers desiring county, city or town lists, or lists of owners in any given section, may obtain these by addressing any of these three companies. **Commercial Car Registrations do not include buses.**

States	Autocar	Brockway-Indiana	Chevrolet	Diamond-T	Dodge	Dover	Fargo	Federal	Ford	G. M. C.	International	Mack	Paige	Pierce-Arrow	Relay	Reo	Republic	Rugby	Sterling	Stewart	Studebaker	Whippet	White	Willys	Willys-Knight	Miscellaneous	Totals	States
Alabama			230		2				215	3	18	2				1					1		1				473	Alabama
Arizona			62		10		2		131	3	2		1			4		2		2	1	1	1	2	1		225	Arizona
Arkansas			118		9				149	9	26	2	1			2		1					5	2			324	Arkansas
Conn.	8	4	108	5	43	4	5	8	253	14	31	17	3		2	23	1		1	9	4		9	2	1	12	567	Conn.
Delaware	9	4	47		3				60	8	6	2				1				2							142	Delaware
Florida	1	5	123		6				276	7	10	3				6						2	4	1			444	Florida
Idaho			50		4				94		6	8				2		2					1	1		3	171	Idaho
Illinois	5	9	723	77	71	1	9	16	944	61	218	24	2		5	35	2		15	6		21	25		22	95	2386	Illinois
Maryland	9	13	221	12	26	2	3	14	356	21	44	15	1			20	2	1	2	6	7	3	14	2		15	809	Maryland
Michigan	1	2	418	4	60	4	3	19	1022	49	59	13	2			22	4	2			2	4	4	6	1	16	1717	Michigan
Minnesota		2	291	4	31		3	3	422	11	70				1	18		2			2	4	6	8	4	7	889	Minn.
Missouri	9	23	1111	24	120	1	12	16	1228	47	208	5	8		1	30	6	4	1	8	11	43	9	38	5	43	3011	Missouri
Montana			98		3		3	1	135	5	43	1				4		2				6	1	6		1	309	Montana
Nebraska			228	2	14		1		263	8	39					1		1		1		6		11	1	2	578	Nebraska
Nevada			11		20				45	5	1	4				1		1	2							1	91	Nevada
N. Hamp.		5	65		5				91	1	8	2				6				2						1	186	N. Hamp.
New Jersey	3	31	367	6	60	2	8	8	675	34	46	83	3	1	2	28	1	1	11	5	10	4	14		7	38	1448	N. Jersey
N. Mexico			67		9		1		62	2	1												3	2			147	N. Mex.
N. Carolina	8	1	240		23	1			239	4	47	2				9					1	1	11	1		1	589	Nor. Car.
N. Dakota			68	3	5		4		80	2	34					1		1				2		5		1	206	N. Dak.
Ohio	6	16	493	5	57	3	9	9	856	59	109	5			2	32	4	4	4	9	1	25	50	10	8	37	1813	Ohio
Oregon	3		117		9		1	3	211	6	14	4				9		2			1	1				6	387	Oregon
Penn'vania	41	37	725	15	174	13	14	20	1421	63	171	65	11		18	52	6	4	17	63	13	19	32	6	2	42	3044	Penna.
Rh. Island	5	3	72		15			4	93	9	8	5			1	8			1		2	2	8	1			237	Rhode Isl.
S. Carolina			129		9		1		121	4	3	1				1	1					1	2				273	S. Car.
S. Dakota			132		10		2	1	123	4	65	6				12		1				2		6	2	4	370	S. Dakota
Utah			75		7				119	7	11					8		2				1	2			2	234	Utah
Wash'ton			189		37		7	5	399	22	33	9				8		7	1		2	2	14	1		42	778	Wash.
W. Virginia		5	128	3	20	1	3		195	17	32				1	10				1			1	2	2	3	424	West Va.
Wisconsin		4	482	11	36	1	5	14	543	22	80		1			24		1	3	7	2	12	4	18	2	26	1293	Wisconsin
Dist. of Col.		1	34	2	6			3	63	7	3				1	8							1			2	131	D. of Col.
Totals	108	165	7222	173	904	33	96	144	10884	514	1446	278	33	1	34	386	27	41	58	121	60	162	222	131	58	400	23701	Totals
Ala., 1929			132		8			2	114	3	10	1			1	3						2	2			1	279	Ala., 1929
Ariz., '29			100		40		1		171	14	10	2				5				3	9	1			2		358	Ariz., '29
Ark., 1929			217	1	19		1		229	4	25					3					1	1	4			2	507	Ark., 1929
Conn., '29	3	4	167	3	58		7	3	194	20	21	28		3	1	42		1		15	7	9	8		1	10	605	Conn., '29
Del., 1929			65		4				57	11	7	1		2		4	1	1					4				157	Del., 1929
Fla., 1929		2	200		12		1	1	307	9	18	2				8	1				1	5	4			1	572	Fla., 1929
Idaho, '29			40		8				47	5	11	7				4		3									125	Idaho, '29
Ill., 1929	10	18	992	144	185		10	25	1145	91	267	42		1	1	80	2		17	5		24	28			136	3223	Ill., 1929
Md., 1929	16	3	174	10	51			8	208	20	17	19			2	24	1		6	5		1	12			9	586	Md., 1929
Mich., 1929	6	2	800	5	108		20	15	1267	85	91	9		4	1	95		3			9	21	14		8	40	2603	Mich., '29
Minn., 1929			374		37			8	447	24	98	2		1	2	31		2			4	17	6		3		1056	Minn., '29
Mo., 1929	7	18	997	35	145		9	37	801	108	188	33				54	3	5	2	1	16	56	23			41	2579	Mo., 1929
Mont., 1929			105		40			2	220	18	96	1		1		13		2			1	1	2		1	4	507	Mont., '29
Neb., 1929		2	282	1	34			1	219	23	70	1				13		2			5	1	2			1	657	Neb., 1929
Nev., 1929			16		18		1		35		2	1									1		2		1	3	80	Nev., 1929
N. H., 1929	1	1	71	1	10				88	6	4					3				6		3				1	195	N. H., '29
N. J., 1929	18	25	489	6	78		12	20	604	55	48	83		22		57		3	3	8	7	19	35		4	98	1694	N. J., '29
N. M., 1929			61		14				48	4	10					1						1					139	N. M., '29
N. C., 1929	3	1	412		40				272	15	13	9				6	2	1			3	5			1	8	791	N. C., '29
N. Dak., '29			68		8			2	56	10	62			1		6		1				2				10	226	N. D., '29
Ohio, 1929	12	11	837	16	106		16	12	857	50	88	25		1	2	66	2	2	1	5	8	42	47		7	40	2253	Ohio, '29
Ore., 1929			125		33		5	6	211	14	17	6				11		1	1		4		7			9	450	Ore., 1929
Penna., '29	34	65	841	17	207		30	11	1088	98	126	50		6	9	108	4	8	20	25	15	36	41		2	54	2895	Pa., 1929
R. I., 1929	5	1	85		31		3	3	79	16	3	6				17				3		4	3			1	260	R. I., 1929
S. Car., 1929		1	186		23			9	113	5	10	1											1				349	S. Car., '29
S. D., 1929			111	1	7				103	5	58					4		1				2			1	3	296	S. D., '29
Utah, 1929			61		11		1		108	3	13	3				4		2			1	1	4			1	213	Utah, '29
Wash., 1929			179		21		4	2	319	14	34	3				14		5			3	2	10		1	18	629	Wash., '29
W. Va., '29		3	142	2	28				161	11	34				3	9		1		1	1	2	1			4	403	W. Va., '29
Wis., 1929			366	18	46		4	13	355	20	66	3		2	1	14			7	7	5	5	7		1	22	962	Wis., 1929
D. of C., '29	2		50	5	8				94	7	10	4				1			2			1	1			1	186	D. C., '29
Totals, 1929	117	157	8745	265	1438		125	180	10017	768	1527	342		44	23	700	16	44	59	84	161	264	268		33	518	25835	Total, 1929

MERCHANDISING ACCESSORIES EQUIPMENT **WHOLESALE** DISTRIBUTION SHOP EQUIPMENT REPLACEMENTS

Denver Jobber Operates Own Print Shop

CUTS OVERHEAD ON DIRECT MAIL

Does Practically All Work, Excepting Binding

By IRA R. ALEXANDER

THE B. K. Sweeney Electrical Company, Denver, Col., and one of the largest jobbers of automotive supplies in the Rocky Mountain territory, like other business concerns, is interested in cutting down overhead costs. About two years ago this firm decided that it was paying too much money for printing costs on its forms and direct mail advertising.

It was decided after considerable thought and investigation to invest a small amount of money and try to get out forms that would compare favorably with the ones which were then being purchased from outside sources. A small room, at that time unused, was put into service as the company's print shop. Inasmuch as the building is owned by the company and the space had not been used except for storage up to that time the initial cost was not great in this respect.

In order to meet the company's demands it was necessary to purchase a small press and the type. The first investment ran to about a thousand dollars. Furthermore a printer and a helper had to be employed.

However, in the two years which the printing plant has been in operation, the amount of money which has been saved may be aptly calculated by the following example:

One form which the company regularly uses when printed by an outside firm cost exactly $12 an issue. The first time that this same form was printed on their own press the cost was $11. At present the entire production cost for this same form has been reduced to $4 an issue. Although this same ratio may not apply to all forms so printed, according to those in charge, the figure well represents the savings which are now being made.

A. S. Amilon, the purchasing agent of the Sweeney company and one of the chief promoters of the printing scheme, says that perhaps the strongest reason for putting in the press, aside from the obvious savings, was to enable the company to keep its salesmen's catalogues up to date.

This may be explained simply when it is realized that these catalogues are looseleaf, and are constantly being changed both as to content and as to price. When a new price, for example, becomes effective, all that is necessary is to set up a new page, or reset the former page, which has previously been filed in a cabinet by number. These may be very easily inserted into the salesman's book, and he is once more up to date.

Another interesting phase of this work is that as each page comes from the press it is filed on a regular form by number, and by the end of the year all of these pages are gathered and the entire lot sent out to be made into a complete stock catalogue for the use of customers. Considering that a perpetual file system is used it is not even necessary to sort these printed pages. They are ready on tap any time that they are needed.

By this system the cost of printing the yearly stock book has been cut from round figures of $6,000 a year to $3,000, at the present time. Of course, the job would be far too large to be handled in the company plant, which makes no attempt to do any of its own binding, but it may easily be seen even on the surface that the saving is greatly worth while.

As for direct mail advertising, the shop is equipped to take care of any work that may be needed by the firm by hand-setting of the type. However, most of the mail so sent out is sent to the company direct from the manufacturers, so that little printing is necessary.

It is the policy of the firm to publish each month an organ called Flashes, which is sent out to a large mailing list. This is usually in the form of a four-page booklet and consists chiefly of special prices and some cuts. Several times a year the size is enlarged to six or eight pages.

Flashes is printed and produced entirely in the printing plant, although it is sometimes necessary to send out some of the work. According to Mr. Amilon, the savings on this job have never been calculated, but he expresses the opinion that the booklet would never have been produced had not the printing plant been installed.

"We are learning to depend on our own plant more all the time," he says, "because we have the equipment and the force to run it. We are never at a loss for something to keep the press busy because new things are occurring all the time. If a let-down does happen there are always forms to be set and printed. In fast, these make up about two-thirds of the work anyway.

"As far as the press goes it has spoken for itself. I know of no other one thing in the firm that has done so much to cut down overhead expenses right at the place where they start. It has paid for itself from the day that it was put into service, and we are going to continue to let it pay for a good time to come."

Launches Re-Lamping Drive

What will undoubtedly mean increased profits to dealers in General Electric Mazda automobile lamps is an ambitious "step-ahead" lighting activity which the National Lamp Works is focusing on this summer's driving season. This program aims to single out the owners of some 23,000,000 registered automobiles and drive home the advantage of super-service, higher candle-power automobile lamps.

Striking, colorful advertising in the Saturday Evening Post of June 28; in Collier's, July 19; Time, July 14, and in leading automobile trade journals and high-power display material will urge car owners to "change to higher-powered super auto lamps for safer, easier driving." On the night of July 5 the General Electric radio hour will boost the drive in a nation-wide hook-up.

At present only four states, namely, Connecticut, Nevada, New Jersey and New York, also the District of Columbia, prohibit by statute thirty-two candle-power lamps.

As a special inducement to dealers, the National Lamp Works is offering free with every purchase of ten each of the four lamps recommended (forty in all) an open display cabinet in striking colors, a jumbo facsimile of the Post advertisement, which, like the cabinet, will tie in with the magazine advertising, and seven attractive pennants.

JOBBERS IN MIDDLE ATLANTIC NAME LAWRIE

Philadelphia, May 1.—At its final session Tuesday afternoon the Middle Atlantic Automotive Jobbers' Association elected the following officers and directors: President, W. C. M. Lawrie, F. Hersh Hardware Company, Allentown, Pa.; vice-president, H. E. Hyde, Southern Wholesalers, Washington, D. C.; secretary and treasurer, R. W. Shreiner, General Automotive Supply Company, Harrisburg, Pa. Directors—G. B. Shearer, Jr., Gaul, Derr & Shearer Company, Philadelphia; C. B. Miller, C. H. Miller Hardware Company, Huntingdon, Pa.; G. F. Hoffman, J. R. Hunt & Co., Baltimore, Md.; C. H. Hall, Jr., Norwood Tire Company, Long Branch, N. J., and E. T. Satchell, Motor Accessories Company, Allentown, Pa.

Wholesale Brevities

Portland, Ore., May 1.—The service managers' division of the Automobile Dealers' Association of Portland will launch a program at the next meeting, to standardize methods and improve the quality of service to car owners. Jay Hays, service manager of the Nash division of Wentworth and Irwin, Inc., is in charge of the program.

Kenosha, Wis., May 1.—Accessory sales and parts distribution in March, and the first two weeks of April, were higher than for the first two months of the year, according to a survey by Automotive Dealers' Association.

Omaha, Neb., May 1.—Equipment has been added at the Willard Storage Battery Company's branch at 2412 St. Mary's Ave., for installing Transitone radios in automobiles.

Shop Expansion

Newark, N. J., May 1.—The Electric Battery Company of Newark, Nick Iacovanti, president, Exide battery distributor, has leased the entire second floor of 47-49 William St. The extra space will triple the total amount available and will be used for the office, electrical shop and battery repairs.

Webster City, Ia., May 1. — The Hoffman Tire and Battery station is completing a new building at a cost of $15,000. A new home for the Raven Auto Body shop has been completed at a cost of $2,000.

Trenton, N. J., May 1. — The Capitol Body and Fender Works, formerly located at 1108 Division St., has moved into its new building at 756 East State St.

Editor's Column

JOBBERS are interested in the statement that New Jersey dealers are losing money to Pennsylvania dealers because of the state requirements as to marking of prices for the sale of gasoline. While jobbers do not handle gasoline and only a few go in for oil distribution, they are interested in anything that keeps motorists away from New Jersey service stations.

The matter has been brought to a head by John J. Meiler a Camden, N. J., service station operator. A suggestion for a change in the form required for advertising the price of gasoline in New Jersey has been made by Meiler to Motor Vehicle Commissioner Harold G. Hoffman, who sees "considerable merit" in the proposed revision which has been referred to Joseph McLaughlin, chief of the gasoline tax division of the department.

"New Jersey's regulation signs for posting the price of gasoline are absolutely all wrong and have driven many thousands of gallons of gas sales out of New Jersey, also the tax which goes with it," Meiler wrote.

"Gasoline prices are posted in Pennsylvania as follows: 'Gas 17 cents plus 4 cents tax,' which totals 21 cents a gallon or $1.05 for five gallons. In New Jersey the signs must read: 'Gas 17.6 cents, including 2 cents tax,' which is 17.6 cents per gallon or 88 cents for five gallons.

"The method of advertising New Jersey gas gives our competitors from another state an advantage that is unfair to the dealer of this state.

"If our prices read like those of Pennsylvania they would compare as follows: New Jersey, gas 15.6 cents, plus tax 2 cents. Pennsylvania, gas 17 cents, plus tax 4 cents.

"This would mean additional revenues to New Jersey from out of state motorists who frequent our roads due to the lower price of gas that has prevailed for the last four or five years. My contact with motorists from other states indicates that they are misled to believe that the price is higher instead of being actually lower, therefore, eliminating more frequent fillings in this state."

THE course of group buying this year is being affected by two opposing forces, according to a well-known marketing authority. These forces, he said, are the depression of general business on the one hand and the urge to secure lower merchandise prices on the other.

Group buying necessarily involves advance purchasing, at least to a certain extent, this executive pointed out. But with general business conditions as they are, the existing unemployment and the need of spurring turnover, retailers are in no mood to place any more advance business than they absolutely have to.

The force tending to support group buying is the realization that, through its means, merchandise costs can be brought down, thus creating a situation in which, to enjoy these benefits, the group-buying retailer has to do a little more advance buying than he cares to do, even in the case of staple goods.

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"Low Cost Transmission Service," a book full of transmission facts, mailed on request.

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Division Unit Corporation of America
Bankers Bldg. Milwaukee, Wis.

FULLER TRANSMISSIONS

MAJOR SPECIFICATIONS AND MECHANICAL DETAILS OF

Make and Model	Capacity—Tons	Chassis Price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gear Set	Location	No. Spds. For.	Rear Axle	Final Drive	Reduction in Low	Brakes, Foot	Brakes, Hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
Am. La France Chief	2	3650	Own	6	3¾x5	33.0	Pw	Str	Vac	DR	Own	C	4	Tim	Wo	31.2	4	D	156	6200	32x6	32x6D
Am. La France W	3-4	3950	Own 2 R	4	4¼x6	28.9	CS	Zen	Vac	AB	Own	C	4	Own	2R	47.4	4	R	160	7200	S36x5	S36x5D
Am. La Fran. Chieftain	3-4	5500	Own	6	4⅛x5⅛	40.8	Pw	Zen	Vac	DR	Own	C	4	Tim	Wo	28.8	4	D	175	7200	S36x8	36x8D
Am. La France V	5	5500	Own 5 R	4	4¾x6	36.2	CS	Zen	Vac	AB	Own	C	4	Own	Wo	54.4	4	R	165	9800	S36x5	S40x6D
Am. La France Z	6½	5750	Own 5 R	4	4¾x6	36.2	CS	Zen	Vac	AB	Own	C	4	Own	Wo	63.5	4	R	165	10000	S36x7	S40x7D
Am. La France U	7½	6000	Own 5 R	4	4¾x6	36.2	CS	Zen	Vac	AB	Own	C	4	Own	—	63.5	4	R	165	10500	S36x7	S40x8D
Am. La Fran. Big Chief	6	6725	Own	6	4½x6	48.6	Pw	Zen	Vac	DR	Own	C	4	Own	2R	32.8	4W	D	226	10600	S40x8	S40x8D
Autocar S A	1½	2700	Her	6	3¾x4½	33.8	Pb	Zen	Vac	L-N	Br-L 35	U	4	Own S A	Sp	27.9	4	R	150	4400	32x6	32x6
Autocar S D	2	3000	Her	6	3¾x4½	33.8	Pb	Zen	Vac	L-N	Br-L 35	U	4	Own S D	2R	33.9	4	R	150	4850	32x6	32x6D
†Autocar H	3	3750	Own	6	4¼x4¾	32.4	CS	Str	Gra	AB	Own T	U	4	Own H	2R	48.9	R	R	114	5800	34x5S	36x10S
†Autocar S H	3	4000	Own	6	4¼x4¾	43.4	Pb	Str	Gra	RB	Own T	U	4	Own H	2R	48.9	R	R	114	5800	34x5S	36x10S
Autocar T	3	5000	Own	6	4¼x4¾	48.6	Pb	Str	Vac	RB	Own T	U	4	Own T	2R	72.5	R	R	187	7100	36x8	36x8D
†Autocar H S	3½	4100	Own	6	4¼x4¾	32.4	CS	Str	Gra	AB	Own T	U	4	Own J	2R	55.2	R	R	114	6900	34x6S	36x12S
†Autocar S H S	3½	4400	Own	6	4¼x4¾	48.6	Pb	Str	Gra	RB	Own T	U	4	Own J	2R	55.2	R	R	114	7000	34x6S	36x12S
Autocar T S	3½	5350	Own	6	4¼x4¾	48.6	Pb	Str	Vac	RB	Own T	U	4	Own Chs	2R	81.7	R	R	187	7100	36x8	36x8D
Autocar S C M	5	5000	Own	6	4½x4¾	48.6	Pb	Str	Vac	RB	Own B	C	4	Own M	2R	72.1	R	R	162	8600	34x7S	36x14S
Brockway 65	1	1195	Con 27 B	6	3⅜x4⅝	27.3	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 36000	Sp	21.3	4	Tr	137	3400	30x5	30x5
Brockway 75	1¼	1290	Con 27 B	6	3⅜x4⅝	27.3	Pb	Zen	Vac	Aut	Br-L 20-4	U	4	Col 36000	Sp	25.6	4	Tr	137	3450	32x6	32x6
Brockway 90	1½	1525	Con 27 B	6	3⅜x4⅝	27.3	Pb	Zen	Vac	Aut	Br-L 20-4	U	4	Col 55000	Sp	25.6	4	Tr	149	3850	32x6	32x6
Brockway JR	1¼	1195	Wis C	4	3¾x5	22.5	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 36001	Sp	21.3	4	Tr	130	3100	30x5	30x5
Brockway E 45	1½	1765	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	L-N	Br-L 30	U	3	Col 55001	Sp	21.0	4	Tr	139½	3650	32x6	32x6
Brockway KW	3	4100	Wis H	6	4 x5	38.2	Pb	Zen	Vac	L-N	Br-L 51	U	4	Wis 1228	2R	33.7	R	Dr	170	6920	34x7	34x7D
Brockway R	4	4200	Con L 4	4	4½x5½	32.4	Pw	Zen	Vac	Eis	Br-L 55	C	4	Tim 66600	Wo	46.8	R	R	164	7890	36x5S	36x12S
Brockway RT	4	4850	Con B 7	4	5 x6	40.0	Pw	Zen	Vac	Eis	Br-L 60	C	4	Tim 66700 S	Wo	53.5	RV	Dr	175	8100	36x5S	36x12S
Brockway 120	2	1990	Con 30 B	6	4 x4⅛	38.4	Pb	Zen	P	Aut	Br-L 35	U	4	Tim 54100	Sp	—	4	Tr	156	5200	32x6	32x6D
Brockway 140	2	2495	Con 30 B	6	4 x4⅛	38.4	Pb	Zen	P	Aut	Br-L 35	U	4	Wis 4916 L	2R	—	4W	Tr	156	5500	32x6	32x6D
Brockway 290	7	7250	Con 36 B	6	4¾x5¾	54.15	Pb	Str	P	L-N	Br-L 70-7	C	7	Tim 68703 D	Wo	—	4W	Dr	182	10750	38x7	40x14S
Brockway 640	10	9700	Con 36 B	6	4¾x5¾	54.15	Pb	Str	P	L-N	Br-L 70-7	C	7	Tim S W 400	Wo	—	4W	Dr	212	14000	38x7	36x10S
Brockway T	5-7	5200	Con B 7	4	5 x6	40.0	Pw	Zen	Vac	Eis	Br-L 60	C	4	Tim 68700	Wo	53.5	R	Dr	175	10065	36x6S	36x14S
Chevrolet	½	365	Own	6	3⅛x3¾	26.3	CS	Car	P	DR	Own	U	3	Own	Sp	12.68	4	R	107	1815	4.50x20	4.50x20
Chevrolet	1½	550	Own	6	3⅛x3¾	26.3	CS	Car	P	DR	Own	U	4	Own	Sp	6.165	4	R	131	2375	30x5	30x5
Day Elder M F	1¼	1345	Con 16-C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	DR	Br-L	U	4	Tim 52000 H	Sp	24.2	4	D	135	3500	30x5	30x5
Day Elder G F	1½	2050	Con 16-C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	DR	Br-L	U	4	Tim 54000 H	Sp	28.3	4	D	156	4400	30x5	30x5D
Day Elder H F	2	2500	Con 16-C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	DR	Br-L 35	U	4	Tim 63702 H	Wo	40.7	4	D	156	4900	S34x4	S34x7
Day Elder J F	3	3900	Con 18 R	6	4 x4½	38.4	Pb	Zen	Vac	DR	Br-L 51	U	4	Tim 65001 H	Wo	41.5	4	D	156	7000	34x7	34x7D
Day Elder K F	4-5	5000	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	Vac	DR	Br-L 60	C	4	Tim 66702 DH	Wo	55.2	4	D	162	9200	S36x5	S36x12
Day Elder N 6 W	7	6000	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	Vac	DR	Br-L 60	C	7	Tim SW 200 H	Wo	73.6	6	D	204	10000	34x7	34x7D
Diamond T 200	1	785	Bud	4	3¾x4½	22.5	Pw	Zen	P	Aut	W-G	U	4	Cla	Sp	—	4	D	128½	3050	30x5	30x5
Diamond T 215	1	885	Bud	6	3⅜x4	27.3	Pw	Zen	P	Aut	W-G	U	4	Cla	Sp	—	4	D	135¼	3150	30x5	30x5
Diamond T 290	1½	1475	Her WXA 2	6	3½x4½	29.4	Pb	Zen	Vac	Aut	Cov	U	4	Col	Sp	—	4	D	156¼	4160	30x5	30x5D
Diamond T 303	2	1745	Her WXB	6	3¾x4½	33.7	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	—	4	D	160¾	4850	32x6	32x6D
Diamond T 551	2½	2250	Her WXC	6	4 x4½	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	—	4	D	168	5600	32x6	32x6D
Diamond T 503	2½	2660	Her WXC	6	4 x4½	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Wo	—	4	D	174	6200	34x7	34x7D
Diamond T 506	2½	2820	Her WXC	6	4 x4½	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Wis	2R	—	4	D	172½	6300	34x7	34x7D
Diamond T 602	3	3440	Her YXC	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Cov	C	4	Tim	Wo	—	4	D	169½	7500	36x8	36x8D
Diamond T 606	3	3500	Her YXC	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Cov	U	4	Wis	2R	—	4	D	186	7500	36x8	36x8D
Diamond T 700	3½	3740	Her YXC	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Cov	C	4	Tim	Wo	—	R	D	162	8100	S36x5	S36x10
Diamond T 801	4	4140	Her YXC	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Br-L	C	7	Own	Wo	—	6WH	D	189½	8300	36x8	4 wh 36x8
Diamond T 1000	5	4420	Her YXC 2	6	4½x4¾	48.6	Pb	Zen	Gra	Aut	Br-L	C	4	Tim	Wo	—	R	D	170½	9700	S36x6	S40x12
Diamond T 1200	6	5600	Her YXC 2	6	4½x4¾	48.6	Pb	Zen	Gra	Aut	Br-L	C	7	Tim	Wo	—	4RW	D	180	11000	34x7	4 w h 34x7D
Diamond T 1600	8	6220	Her YXC 3	6	4⅝x4¾	51.3	Pb	Zen	Gra	Aut	Br-L	C	7	Tim	Wo	—	4W	D	190	11700	36x8	4 wh 36x8D
Diamond T 2500	10-12	8000	Wak 6 RB	6	5 x5¾	60	Pb	Zen	Gra	Mag	Br-L	C	7	Tim	Wo	—	4W	D	194	13100	S36x7	4 wh 36x12S
Dodge Bros. U-1	½	545	Own	4	3⅝x4¼	21.3	Pb	Car	Vac	NE	Own	U	3	Own	Sp	14.28	4	D	109	1900	5.00x20B	5.00x20B
Dodge Bros. U-1	¾	695	Own	4	3⅝x4¼	21.3	Pb	Car	Vac	NE	Own	U	3	Own	Sp	21.68	4	D	124	2460	5.50x20B	5.50x20B
Dodge Bros. U-1	1	795	Own	4	3⅝x4¼	21.3	Pb	Car	Vac	NE	Own	U	4	Own	Sp	36.136	4	D	133	2750	6.00x20B	32x6
Dodge Bros. DA1	¾	795	Own	6	3⅜x3⅞	27.3	Pb	Zen	Vac	NE	Own	U	3	Own	Sp	19.21	4	D	124	2560	5.50x20B	5.50x20B
Dodge Bros. DA1	1	895	Own	6	3⅜x3⅞	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	33.45	4	D	133	2850	6.00x20B	32x6
Dodge Bros. DA1	1	1095	Own	6	3⅜x3⅞	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	36.83	4	D	140	2955	30x5	30x5
Dodge Bros. DA1	1½	1365	Own	6	3⅜x3⅞	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	36.83	4	D	150	3695	32x6	32x6
Dodge Bros. DA1	1½	1415	Own	6	3⅜x3⅞	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	36.83	4	D	165	3810	32x6	32x6
Dodge Bros. DB1	2	1595	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	36.83	4	D	150	3930	32x6	34x7
Dodge Bros. DB1	2	1645	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	36.83	4	D	165	4070	32x6	34x7
Dodge Bros. DB1	3	1845	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	46.31	4	D	135	4235	32x6	32x6D
Dodge Bros. DB1	3	1895	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	41.43	4	D	165	4520	32x6	32x6D
Dodge Bros. DB1	3	1945	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	46.31	4	D	185	4715	32x6	32x6D
Dover	¾	445	Own	6	2⅞x4½	18.2	CS	Mar	Vac	Aut	Own	U	3	Own	Sp	17.8	4	4	110	2150	30x5	31x5.50
Durant Com. Chassis	½	495	Con	4	3⅜x4¼	18.2	Pb	Til	Vac	Aut	Own	C	3	Own	Sp	16.16	4	4	107	1670	28x4.75	28x4.75
Fargo Packet	½	545	Own	6	3 x4⅛	21.6	Pb	Str	Vac	NE	Own	U	3	Own	Sp	14.29	4	Tr	——	1835	5.00x19	5.00x19
Fargo Clipper	¾	725	Own	6	3⅛x4¼	23.4	Pb	Str	Vac	DR	Own	U	3	Own	Sp	15.53	4	Tr	——	2325	5.50x18	5.50x18
Fargo Freighter	1	795	Own	6	3 x4⅛	21.6	Pb	Str	Vac	NE	Own	U	4	Own	Sp	37.19	4	Tr	——	2785	6.00x20	32x6
Federal 4FW	1	980	Wak X A	4	3½x4½	19.6	Pb	Zen	Vac	DR	W-G T9	U	4	Cla B370	Sp	40.8	4	Tr	127	2975	30x5	30x5
Federal E6	1	1090	Con 17 E	6	3⅜x4	27.3	Pb	Zen	P	DR	W-G T9	U	4	Cla B370	Sp	34.6	4	Tr	132	3120	30x5	30x5
Federal F7	1½	1525	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	DR	Own	U	4	Tim 52005H	Sp	24.3	4	Tr	132	3750	30x5	30x5D
Federal A6	2	1855	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	DR	Own	C	4	Cla B610	Sp	38.5	4	Tr	151	4580	32x6	32x6D
Federal A6T	2½	2185	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	DR	Own	C	4	Tim 58000H	Sp	41.3	4	Tr	151	4950	32x6	32x6D
Federal T10R	2½-3	2740	Con 16 R	6	4 x4⅛	38.4	Pb	Zen	Vac	DR	Own	C	4	Tim 58000H	Sp	36.3	4	Tr	165	6600	34x7	34x7D
Federal T10W	2½-3	2915	Con 16 R	6	4 x4⅛	38.4	Pb	Zen	Vac	DR	Own	C	4	Tim 65001H	Wo	44.0	4	Tr	165	6600	34x7	34x7D
Federal U6	3-3½	3860	Con 18 R	6	4 x4½	38.4	Pb	Str	Vac	DR	Br-L 55	C	7	Tim 65706HP	Wo	64.6	4	D	165	7210	34x7	34x7D
Federal 4C6A	4-5	4735	Con 20 R	6	4⅛x4¾	40.8	Pb	Zen	Vac	DR	Br-L 55	C	7	Tim 66704HP	Wo	73.6	4	D	192	8330	36x8	36x8D
Federal 4C6AB	4-5	4960	Con 20 R	6	4⅛x4¾	40.8	Pb	Zen	Vac	DR	Br-L 55	C	7	Tim 66704TWP	Wo	73.6	4W	D	192	8600	36x8	36x8D
Federal X8	7½	5085	Con B 7	4	5 x6	40	Pw	Zen	Vac	AB	Br-L 60	C	7	Tim 68700DP	Wo	110.9	R	D	162	9750	36x6S	40x14S
Federal X8R	7½	5810	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	Vac	DR	Br-L 60	C	7	Tim 68700DP	Wo	110.9	R	D	162	10000	40x8	40x8D
Ford A A	1½	520	Own	4	3⅞x4¼	24.0	Sp	Zen	Gra	Own	Own	U	4	Own	St	42.24	4	4	131½	2792	6.00x20	32x6
F. W. D.—H	1½	3300	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	Eis	Cotta	C	4	Own	St	38.1	4	R	121	5300	34x7	34x7
F. W. D.—H 6	2	3425	Wak	6	3½x4½	29.4	Pb	Zen	Vac	Eis	Br-L	U	4	Own	St	35.0	4	R	133	5500	34x7	34x7
F. W. D.—BTL 4	2	3900	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	Eis	Br-L	C	7	Own	St	84.7	4	R	120	6000	36x8	36x8
F. W. D.—HH 6	2½	4000	Wak	6	3¾x4½	33.7	Pb	Zen	Vac	Eis	Br-L	C	7	Own	St	101.0	4	R	133	5700	36x8	36x8
F. W. D.—B	3	4200	Own	4	4¾x5½	36.1	Pb	Str	Gra	Eis	Own	C	3	Own	St	35.6	4	R	124	6460	36x6S	36x6S
F. W. D.—B 5	3	4525	Own	4	4¾x5½	36.1	Pb	Str	Gra	Eis	Own	C	5	Own	St	88.6	4	R	132	6800	36x6S	36x6S
F. W. D.—B T	3	4742	Own	4	4¾x5½	36.1	Pb	Str	Vac	Eis	Own	C	5	Own	St	101.0	4	R	133¾	7700	40x7S	40x5SD
F. W. D.—U 4	3	4575	Own	4	4¾x5½	36.1	Pb	Str	Vac	Eis	Own	C	5	Own	St	88.6	4	R	148	7000	36x6S	36x6S
F. W. D.—U 6	3½	4575	Wak	6	4 x4¾	38.6	Pb	Zen	Vac	Eis	Own	C	5	Own	St	88.6	4	R	148	7200	36x6S	36x6S
*F. W. D.—X 6	6	6500	Wak	6	4¼x4¾	43.3	Pb	Zen	Vac	Eis	Own	C	5	Own	St	88.6	4	4	170	9500	36x8	36x8
Garford Series S 11	1	1600	Bud H S 6	6	3⅜x4½	27.3	PC	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.5	4	D	142	3900	P30x5	P30x5
Garford Series S 11	1½	1900	Bud H S 6	6	3⅜x4½	27.3	PC	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4300	P30x5	DP30x5
Garford Series 40	1½	2990	Bud D S 6	6	3⅝x5	31.5	PC	Zen	Vac	Aut	Br-L	U	4	Tim	W	34.8	4	D	168	4700	P34x5	DP34x5
Garford Series S 11	2	2030	Bud H S 6	6	3⅜x4½	27.3	PC	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4500	P32x6	DP32x6
Garford Series 40	2	3240	Bud D S 6	6	3⅝x5	31.5	PC	Zen	Vac	Aut	Br-L	U	4	Tim	W	34.8	4	D	168	4900	P36x6	DP36x6
Garford Series 40	2½	3240	Bud D S 6	6	3⅝x5	31.5	PC	Zen	Vac	Aut	Br-L	U	4	Tim	W	34.8	4	D	168	5100	P36x6	DP36x6
Garford Series 60	2½	4580	Bud B U S	6	4 x5⅛	38.4	PC	Zen	Vac	Aut	Br-L	U	5	Tim	W	63.0	4	D	175	7000	P36x6	DP36x6
Garford Series 60	3	4680	Bud B U S	6	4 x5⅛	38.4	PC	Zen	Vac	Aut	Br-L	U	5	Tim	W	63.0	4	D	175	7100	P36x6	DP38x7
Garford Series 80	3½	5250	Bud B A 6	6	4⅛x5⅛	40.8	PC	Zen	Vac	Aut	Br-L	A	7	Tim	W	98.2	4	D	175	8200	S36x6	S36x12
Garford Series 80	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	PC	Zen	Vac	Aut	Br-L	A	7	Tim	W	98.2	4	D	175	8400	S36x6	S36x14
Gen. Mot. T11-1001	*3800	625	Pontiac	6	3 5/16x3⅞	26.3	Pb	Mar	P	DR	Own	U	3	Pontiac	Sp	14.7	4	D	109⅜	1980	5.00x19B	5.50x19B
Gen. Mot. T15-1501	*5400	695	Pontiac	6	3 5/16x3⅞	26.3	Pb	Mar	P	DR	Own	U	3	Tim 51500	Sp	16.09	4	4	130	2625	5.50x20B	5.50x20B
Gen. Mot. T17-1701	*5500	735	Pontiac	6	3 5/16x3⅞	26.3	Pb	Mar	P	DR	Own	U	3	Tim 51505	Sp	16.04	4	4	130	2650	6.50x20B	6.50x20B
Gen. Mot. T17-1707	*6500	750	Pontiac	6	3 5/16x3⅞	26.3	Pb	Mar	P	DR	Own	U	3	Tim 51505	Sp	16.04	4	4	130	2670	5.50x20B	32x6
Gen. Mot. T19-2201	*6300	895	Pontiac	6	3 5/16x3⅞	26.3	Pb	Mar	P	DR	Mun	U	4	Tim 5261	Sp	34.45	4	D	130	2850	5.50x20B	32x6
Gen. Mot. T19-2214	*8500	985	Pontiac	6	3 5/16x3⅞	26.3	Pb	Mar	P	DR	Mun	U	4	Tim 5261	Sp	34.45	4	D	130	2925	30x5	30x5D

1930 COMMERCIAL CARS BUILT IN THE UNITED STATES

Make and Model	Capacity—Tons	Chassis Price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gear Set	Location	No. Spds. For.	Rear Axle	Final Drive	Reduction in Low	Brakes, Foot	Brakes, Hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
Gen. Mot. T25-2501	*6800	1235	Buick	6	3 1/16x4 5/8	28.3	Pb	Mar	P	DR	Mun	U	4	Tim 5261	Sp	29.62	4	D	130	3375	6.00x20B	7.50x20B
Gen. Mot. T25-2509	*8500	1280	Buick	6	3 1/16x4 5/8	28.3	Pb	Mar	P	DR	Mun	U	4	Tim 5261	Sp	29.62	4	D	130	3425	30x5	30x5D
Gen. Mot. T30-3206	*9000	1555	Buick	6	3 1/16x4 5/8	28.3	Pb	Mar	P	DR	Mun	U	4	Eat 1617	Sp	28.6	4	D	141	4450	6.00x20B	8.25x20B
Gen. Mot. T30-3203	*11000	1605	Buick	6	3 1/16x4 5/8	28.3	Pb	Mar	P	DR	Mun	U	4	Eat 1617	Sp	28.6	4	D	141	4525	32x6	32x6D
Gen. Mot. T42-4206	*10600	1735	Buick	6	3 1/16x4 5/8	28.3	Pb	Mar	P	DR	Mun	U	4	Eat 1717	Sp	33.38	4	D	141	4575	7.00x20B	9.00x20B
Gen. Mot. T42-4203	*14000	1960	Buick	6	3 1/16x4 5/8	28.3	Pb	Mar	P	DR	Mun	U	4	Eat 1717	Sp	33.38	4	D	141	4905	36x6	36x6D
Gen. Mot. T44-4401	*12000	1965	Buick	6	3 1/16x4 5/8	28.3	Pb	Mar	P	DR	Mun	U	4	Eat T44DR	2R	40.89	4	D	141	4825	32x6	32x6D
Gen. Mot. T44-4404	*15000	2095	Buick	6	3 1/16x4 5/8	28.3	Pb	Mar	P	DR	Mun	U	4	Eat T44DR	2R	40.89	4	D	141	5095	34x7	34x7D
Gen. Mot. T60-6202	*16500	3035	Buick	6	3 3/4x5	33.7	Pb	Mar	P	DR	Mun	U	4	Tim 65706	Wo	52.53	4	D	154 1/4	6625	34x7	34x7D
Gen. Mot. T60-6205	*18500	3125	Buick	6	3 3/4x5	33.7	Pb	Mar	P	DR	Mun	U	4	Tim 65706	Wo	52.53	4	D	154 1/4	6625	9.00x20B	9.00x20DB
Gen. Mot. T82-8202	*19000	3795	Buick	6	3 3/4x5	33.7	Pb	Mar	P	DR	Br-L	C	5	Tim 66704	Wo	84.91	4	D	155	7100	9.00x20B	9.00x20DB
Gen. Mot. T82-8207	*22000	4070	Buick	6	3 3/4x5	33.7	Pb	Mar	P	DR	Br-L	C	5	Tim 66704	Wo	84.91	4	D	155	7450	38x7	38x9D
Gen. Mot. T90-9001	*23000	5885	Buick	6	3 3/4x5	33.7	Pb	Mar	P	DR	Br-L	C	5	Tim SW-200	Wo	75.04	WR	D	185 1/4	9100	7.50x20B	7.50x20D
Gen. Mot. T90-9004	*28000	6055	Buick	6	3 3/4x5	33.7	Pb	Mar	P	DR	Br-L	C	5	Tim SW-200	Wo	75.04	WR	D	185 1/4	9475	8.25x20B	8.25x20DB
*Gramm B	1 1/2	1495	Lyc 4 SL	6	3 1/4 x4 1/2	25.3	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	34.3	4	Tr	140	3800	30x5	30x5D
*Gramm C	2	1795	Lyc ASA	6	3 5/8x4 1/2	31.54	Pb	Zen	P	Aut	Cov	U	4	Tim	Sp	31	4	Tr	160	4820	32x6	32x6D
*Gramm D	2 1/2	2195	Lyc TS	6	3 7/8x5	36	Pb	Zen	P	Aut	Cov	U	4	Tim	Sp	33	4	Tr	160	5100	32x6	32x6D
*Gramm E	3	2595	Lyc TS	6	3 7/8x5	36	Pb	Zen	P	Aut	Ful	U	4	Wis	2R	35	4	R	150	5200	34x7	34x7D
*Gramm EY	3	3595	Con 20 R	6	4 1/8x4 3/4	40.80	Pb	Zen	P	Aut	Ful	U	4	Tim	Sp	30	4	D	190	6750	32x6	32x6D
*Gramm GY	4	4345	Con 21 R	6	4 3/8x4 3/4	45.9	Pb	Zen	P	Aut	Ful	U	4	Wis	2R	28	4	D	210	7200	34x7	34x7D
*Gramm HY	5	6545	Con 16 H	6	4 3/4 x5 3/4	54.15	Pb	Zen	P	Aut	Ful	U	4	Wis	2R	25.2	4	D	236	9600	36x8	36x8D
*Gramm O-35	3	3595	Lyc TS	6	3 7/8x5	36	Pb	Zen	P	Aut	Ful	C	8	Wis	2R	71.2	D	R	153	7200	36x5S	36x10S
*Gramm O-45	4	3995	Lyc TS	6	3 7/8x5	36	Pb	Zen	P	Aut	Ful	C	8	Wis	2R	75.8	D	R	153	7700	36x5S	36x12S
*Gramm O-60	5	4745	Lyc TS	6	3 7/8x5	36	Pb	Zen	P	Aut	Ful	C	8	Wis	2R	78.4	D	R	153	8800	36x6S	36x14S
*Gramm T-38	3	3595	Lyc TS	6	3 7/8x5	36	Pb	Zen	P	Aut	Ful	U	4	Wis	2R	45	D	R	153	7200	36x5S	36x10S
*Gramm T-48	4	3995	Lyc TS	6	3 7/8x5	36	Pb	Zen	P	Aut	Ful	U	4	Wis	2R	47	D	R	153	7700	36x5S	36x12S
Indiana 64	1	1195	Con 27 B	6	3 3/8x4 5/8	27.3	Pb	Str	Vac	Aut	Br-L	20	U	3	Col 36020	Sp	21.3	4	Tr	137	3435	30x5	30x5
Indiana 74	1 1/4	1290	Con 27 B	6	3 3/8x4 5/8	27.3	Pb	Str	Vac	Aut	Br-L	20	U	4	Col 36020	Sp	25.6	4	Tr	137	3450	32x6	32x6
Indiana 89	1 1/2	1525	Con 27 B	6	3 3/8x4 5/8	27.3	Pb	Str	Vac	Aut	Br-L	20	U	4	Col 55002	Sp	25.6	4	Tr	149	3650	32x6	32x6
Indiana 11	1 1/4	1425	Her OX	4	4 x5	25.6	Pb	Str	Gra	Aut	Br-L	31	U	3	Cla B 365	Sp	24.48	R	R	129 1/2	3500	30x5	30x5
Indiana 111	1 1/2	1630	Her OX	4	4 x5	25.6	Pb	Str	Gra	Aut	Br-L	31	U	3	Cla B 509	Sp	26.4	R	R	129 1/2	3600	30x5	32x6
Indiana 111 XW	2	1850	Her OXP	4	4 x5	25.6	Pb	Str	Vac	Eis	Br-L	35	U	4	Wis 4611	2R	30.14	R	Tr	120	3740	32x6	32x6D
Indiana 120	2	1990	Con 30 B	6	4 x4 1/8	38.4	Pb	Str	P	Aut	Br-L	35	U	4	Tim 54003 H	Sp	—	4	Tr	156	5200	32x6	32x6D
Indiana 140	2	2495	Con 30 B	6	4 x4 1/8	38.4	Pb	Str	P	Aut	Br-L	35	U	4	Wis 4916 L	2R	—	4V	Tr	156	5500	32x6	32x6D
Indiana 115 A	2 1/2	2740	Her OXCP	4	4 1/4x5	28.9	Pb	Str	Vac	Eis	Br-L	35	U	4	Cla B 720	Sp	42.99	R	Tr	132	4970	32x6	34x7D
Indiana 615 A	2 1/2	3070	Wis Y	6	3 3/8x5	27.34	Pb	Str	Vac	Eis	Br-L	35	U	4	Cla B 720	Sp	46.29	R	Tr	136	5160	32x6	34x7D
Indiana 126	3	3780	Her L	4	4 1/2x3 3/4	32.4	Pb	Str	Vac	Eis	Br-L	55-7	C	7	Tim 65704 S P	Wo	80.7	R	J	162 1/2	7400	36x5S	36x10S
Indiana 626	3	4185	Wis H	6	4 x5	38.40	Pb	Str	Vac	Eis	Br-L	55-7	C	7	Tim 65704 S P	Wo	73.6	R	J	168 1/2	7625	36x5S	36x10S
Indiana 627	3	3725	Wis H	6	4 x5	38.40	Pb	Str	Vac	Aut	Br-L	55-4	U	4	Cla B 720	Sp	42.8	R	D	168 3/4	6500	32x6	38x9
Indiana 127 AW	3	3775	Her K	4	4 1/4 x5	28.90	Pb	Str	Vac	Eis	Br-L	51-5	U	5	Wis 1228	2R	41.72	RV	D	158 1/4	7000	34x7	34x7D
Indiana 627 AW	3	4075	Wis H	6	4 x5	38.40	Pb	Str	Vac	Eis	Br-L	51-5	U	5	Wis 1228	2R	41.72	RV	D	156 1/4	7200	34x7	34x7D
Indiana 638	4	4955	Wis H	6	4 x5	38.40	Pb	Str	Vac	Eis	Br-L	60-7	C	7	Tim 66700 S P	Wo	83.1	R	J	174 1/4	8100	36x5S	36x12S
Indiana 290	7	7250	Con 36 B	6	4 3/4 x5 3/4	54.15	Pb	Str	P	L-N	Br-L	70-7	C	7	Tim 68703 E	Wo	—	4W	D	182	10750	38x7	40x14S
Indiana 640	10	9700	Con 36 B	6	4 3/4 x5 3/4	54.15	Pb	Str	P	L-N	Br-L	70-7	C	7	Tim 6 Wh	Wo	—	4RW	D	212	14000	38x7	36x10S
Int. Harvester Sp. Del.	3/4	720	Wak X A	4	3 1/2x4 1/2	19.6	Pb	Zen	Vac	DR	Mec	U	3	Eat 502 R	Sp	15.1	4	2	124	2200	30x5.25	30x5.25
Int. Harv. 6 Spd. Spec.	1	820	Wak X A	4	3 1/2x4 1/2	19.6	Pb	Zen	Vac	DR	Mec	U	3	Eat 1124	Sp	*52.6	4	2	124	2430	30x5	30x5
Int. Harvester S-24	1 1/4	1160	Lyc C T	4	3 3/4 x5	22.5	Pw	Zen	Vac	DR	Own	U	3	Eat 1002	Sp	21.3	4	2	130	3200	30x5	30x5
Int. Harvester S-26	1 1/4	1310	Lyc 4 S L	6	3 1/4 x4 1/2	25.3	Pb	Zen	Vac	DR	Own	U	3	Eat 1002	Sp	21.3	4	2	130	3250	30x5	30x5
Int. Harvester SF-34	1 1/2	1450	Lyc C T	4	3 3/4x5	22.5	Pw	Zen	Vac	DR	Own	U	3	Eat 1502	Sp	22.6	4	2	*140	3520	30x5	32x6
Int. Harvester SF-36	1 1/2	1600	Lyc 4 S L	6	3 1/4 x4 1/2	25.3	Pb	Zen	Vac	DR	Own	U	3	Eat 1502	Sp	22.6	4	2	*140	3570	30x5	32x6
Int. Harvester SD-44	2	1590	Lyc C T	4	3 3/4x5	22.5	Pw	Zen	Vac	AB	Own	U	4	Eat 2002	Sp	40.6	4	2	117	3700	30x5	32x6
Int. Harvester SD-46	2	1740	Lyc 4 S L	6	3 1/4 x4 1/2	25.3	Pb	Zen	Vac	AB	Own	U	4	Eat 2002	Sp	40.6	4	2	117	3750	30x5	32x6
Int. Harvester SF-46	2	1950	Lyc 4 S L	6	3 1/4 x4 1/2	25.3	Pb	Zen	Vac	DR	Own	U	4	Eat 2002	Sp	40.6	4	2	*140	4000	32x6P	32x6DP
Int. Harvester A-4	2	1985	Own-FBB	6	3 5/8 x4 1/2	31.5	Pb	Zen	Vac	DR	Own	U	5	Eat 1712	Sp	47.8	4	2	*145	5070	32x6	32x6DP
Int. Harvester A-5	3	2550	Own-FBB	6	3 5/8 x4 1/2	31.5	Pb	Zen	Vac	DR	Own	U	5	Eat 2112	Sp	52.6	4	2	*156	5606	34x7	34x7DP
Int. Harvester HS-54	2 1/2	3850	Hall-S 151	4	4 1/4 x5 1/2	28.9	Pb	Zen	Vac	RB	Own	U	5	Eat 54	2R	60.5	4	4	*148	8000	36x5S	36x8S
Int. Harvester HS-54-C	2 1/2	3850	Hall-S 151	4	4 1/4 x5 1/2	28.9	Pb	Zen	Vac	RB	Own	U	5	Own A M 428	Ch	63.8	4	4	*148	8665	36x5S	36x10S
Int. Harvester W-1	2 1/2	3850	Hall-S 151	4	4 1/4 x5 1/2	28.9	Pb	Zen	Vac	RB	Own	U	5	Eat 58	2R	60.5	4	2	*148	8300	36x5S	36x8S
Int. Harvester HS-74	3 1/2	4850	Hall-S 152	4	4 3/4 x5 1/2	36.1	Pb	Zen	Vac	RB	Own	U	5	Eat 74	2R	70.5	4	4	*160	10700	36x5S	40x12S
Int. Harvester HS-74-C	3 1/2	4850	Hall-S 152	4	4 3/4 x5 1/2	36.1	Pb	Zen	Vac	RB	Own	U	5	Own A M 427	Ch	79.1	4	4	*160	11000	36x6S	40x12S
Int. Harvester W-3	3 1/2	4850	Hall-S 152	4	4 3/4 x5 1/2	36.1	Pb	Zen	Vac	RB	Own	U	5	Eat 78	2R	70.5	4	2	*160	10125	36x6S	40x12S
Int. Harv's'r HS-104-C	5	5500	Hall-S 152	4	4 3/4 x5 1/2	36.1	Pb	Zen	Vac	RB	Own	U	5	Own A M 427	Ch	90.5	4	4	*160	11095	36x6S	40x14S
La France-Repub. A-1	*6000	990	Lyc	6	2 7/8x4 3/4	19.8	Pb	Zen	Vac	Aut	Ful	U	4	Tim	Sp	36.1	4	Tr	132	3000	5.50x20	32x6
La France-Repub. C-1	*7000	1295	Lyc	6	3 1/4 x4 1/2	25.4	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.1	4	Tr	144	3300	6.00x20	32x6
La France-Repub. D-1	*9030	1595	Lyc	6	3 1/4 x4 1/2	25.4	Pb	Zen	Vac	Aut	Ful	U	4	Tim	Sp	37.9	4	Tr	144	3725	30x5	30x5D
La France-Repub. F-1	*12000	2195	Lyc	6	3 1/4 x4 1/2	25.4	Pb	Zen	Vac	Aut	Ful	U	4	Eat	Sp	43.0	4	D	155	4850	32x6	32x6D
La France-Repub. F-2	*13000	2395	Lyc	6	3 5/8 x5	31.5	Pb	Zen	Vac	Aut	Ful	U	4	Tim	Sp	40.1	4	D	174	5870	32x6	32x6D
La France-Repub. H-1	*15000	2985	Lyc	6	3 7/8x5	36.0	Pb	Zen	Vac	Aut	Ful	U	4	Eat	Sp	36.0	4	D	163	5850	34x7	34x7D
La France-Repub. L-1	*18000	3595	Lyc	6	3 7/8x5	36.0	Pb	Zen	Vac	Aut	Ful	U	4	Eat	2R	48.0	4	D	180	6900	36x8	36x8D
La France-Repub. M-1	*20000	3800	Wak	6	4 x4 3/4	38.4	Pb	Zen	Vac	Aut	Br-L	U	5	Eat	2R	53.0	D	R	171	6900	36x8	36x8D
Mack AB	2 1/2-3	3950	Own	4	4 1/4 x5	28.9	Pb	Str	Gra	RB	Own	U	4	Own	2R	Opt	R	D	2-Opt	——	36x4S	36x8S
††Mack BJ	3 1/2-5	6150	Own	6	4 1/2x5 1/2	48.6	Pb	Str	Vac	NE	Own	C	4	Own	2R	Opt	4	D	3-Opt	——	36x8	36x8D
††Mack AK	3 1/2-5	5150	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	4	Js	3-Opt	——	36x5S	36x5DS
††Mack AK	3 1/2-5	5250	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	C	4	Own	2R	Opt	4	D	3-Opt	——	36x5S	36x5DS
††Mack AC	3 1/2-5	4950	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	J	R	3-Opt	——	36x5S	40x10S
††Mack AC	5 1/2-7	5500	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	J	R	3-Opt	——	36x6S	40x12S
††Mack AC	7 1/2	6000	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	J	R	3-Opt	——	36x7S	40x14S
††Mack AP	7 1/2	9500	Own	6	5 x6	60.0	Pb	Str	Gra	NE	Own	J	4	Own	Ch	Opt	R	Js	191	——	36x7S	40x8DS
Mack BL	1	2500	Own	6	3 1/4x5	25.39	Pw	Str	Vac	NE	Own	U	4	Own	Sp	Opt	4	D	148	——	B6.00x20	DB6.00x20
††Mack BG	1 1/2	3000	Own	6	3 5/8x5	31.57	Pw	Str	Vac	NE	Own	U	4	Own	Sp	Opt	4	D	138-156	——	P32x6	DP32x6
††Mack AB	2 1/2-3	3500	Own	4	4 1/4 x5	28.9	Pb	Str	Gra	RB	Own	U	4	Own	Ch	Opt	R	D	2-Opt	——	36x4S	36x8S
Mack AB	2 1/2-3	4750	Own	6	3 5/8x5	31.57	Pw	Str	Vac	NE	Own	U	4	Own	2R	Opt	R	D	2-Opt	——	P34x7	DP34x7
††Mack AB	2 1/2-3	4300	Own	6	3 5/8x5	31.57	Pw	Str	Vac	NE	Own	U	4	Own	Ch	Opt	R	D	2-Opt	——	P34x7	DP34x7
††Mack BC	3 1/2-4	5250	Own	6	4 x5 1/2	38.4	Pb	Str	Vac	NE	Own	U	4	Own	2R	Opt	4	D	2-Opt	——	P36x8	DP36x8
††Mack BC	3 1/2-4	4250	Own	4	4 1/4 x5	28.9	Pb	Str	Gra	RB	Own	U	4	Own	2R	Opt	4	D	2-Opt	——	36x5S	36x5DS
Mack AC 6-wheel	10	7500	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	4R	Js	3-Opt	——	36x7S	40x12S
Mack AP 6-wheel	10	12000	Own	6	5 x6	60.0	Pb	Str	Gra	NE	Own	J	4	Own	Ch	Opt	4R	Js	3-Opt	——	36x7	40x12S
Paige	3/4	860	Own	6	3 1/4 x4 1/2	25.35	Pb	Stw	P	DR	W-G	U	3	Sal	Sp	17.36	4	Tr	115	2465	B5.50x19	B5.50x19
Relay Series S 11	1	1700	Bud H S 6	6	3 3/8x4 1/2	27.3	PC	Zen	Vac	Aut	Br-L	U	4	Own	Relay	25.7	4	D	142	4050	P30x5	P30x5
Relay Series S 11	1 1/2	1900	Bud H S 6	6	3 3/8x4 1/2	27.3	PC	Zen	Vac	Aut	Br-L	U	4	Own	Relay	25.7	4	D	162	4500	P30x5	DP30x5
Relay Series 40	1 1/2	2990	Bud D S 6	6	3 5/8 x5	31.2	PC	Zen	Vac	Aut	Br-L	U	4	Own	Relay	34.5	4	D	168	5300	P34x5	DP34x5
Relay Series S 11	2	2030	Bud H S 6	6	3 3/8x4 1/2	27.3	PC	Zen	Vac	Aut	Br-L	U	4	Own	Relay	30.0	4	D	162	4700	D32x6	DP32x6
Relay Series 40	2	3240	Bud D S 6	6	3 5/8x5	31.5	PC	Zen	Vac	Aut	Br-L	U	4	Own	Relay	34.5	4	D	168	5500	P36x6	DP36x6
Relay Series 50	2	3860	Bud D W 6	6	3 3/4x5	33.7	PC	Zen	Vac	Aut	Br-L	U	5	Own	Relay	58.5	4	D	161	6800	P36x6	DP36x6
Relay Series 40	2 1/2	3240	Bud D S 6	6	3 5/8 x5	31.5	PC	Zen	Vac	Aut	Br-L	U	4	Own	Relay	34.5	4	D	168	5700	P36x6	DP36x6
Relay Series 50	2 1/2	3950	Bud D W 6	6	3 3/4 x5	33.7	PC	Lon	Vac	Aut	Br-L	U	5	Own	Relay	58.5	4	D	161	7000	P36x6	DP36x7
Relay Series 60	2 1/2	4530	Bud B U S	6	4 x5 1/8	38.4	PC	Lon	Vac	Aut	Br-L	U	5	Own	Relay	58.5	4	D	175	7350	P36x6	DP36x6
Relay Series 50	3	4130	Bud D W 6	6	3 3/4 x5	33.7	PC	Lon	Vac	Aut	Br-L	U	5	Own	Relay	58.5	4	D	161	7200	P36x6	DP40x8
Relay Series 60	3	4595	Bud B U S	6	4 x5 1/8	38.4	PC	Lon	Vac	Aut	Br-L	U	5	Own	Relay	58.5	4	D	175	7500	P36x6	DP38x7
Relay Series 80	3	5250	Bud B A 6	6	4 1/8 x5 1/8	40.8	PC	Lon	Vac	Aut	Br-L	U	8	Own	Relay	84.18	4	D	175	8400	P36x6	S40x10
Relay Series 60	3 1/2	4745	Bud B U S	6	4 x5 1/8	38.4	PC	Lon	Vac	Aut	Br-L	U	5	Own	Relay	58.5	4	D	175	7800	P38x7	DP40x8
Relay Series 80	3 1/2	5330	Bud B A	6	4 1/8 x5 1/8	40.8	PC	Lon	Vac	Aut	Cov	A	8	Own	Relay	84.18	4	D	175	8600	P36x6	S40x12
Relay Series 80	4	5380	Bud B A	6	4 1/8 x5 1/8	40.8	PC	Lon	Vac	Aut	Cov	A	8	Own	Relay	84.18	4	D	175	8800	P38x7	S40x14
Reo 15 Junior	1/2	785	Con 16 E	6	3 3/8 x4	27.3	Pb	Sch	P	DR	W-G	U	3	Sal	Sp	14.63	4	Tr	115	2290	6.00x18	6.00x18
Reo D A	1	995	Con 16 E	6	3 3/8 x4	27.3	Pb	Sch	Vac	DR	W-G	U	3	Own	Sp	18.4	4	Tr	123	2755	30x5	30x5
Reo D F	1	1095	Own C B	6	3 5/8 x5	27.3	Pb	Sch	P	DR	Own	U	3	Own	Sp	17.1	4	Tr	135	3200	6.00x20	32x6
Reo F A	1 1/2	1295	Own	6	3 3/8x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	22.96	4	Tr	137	3525	32x6	32x6
Reo F E	1 1/2	1395	Own	6	3 3/8x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	22.96	4	Tr	152	3700	32x6	32x6
Reo F H	2	1595	Own	6	3 3/8x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	37.6	4	Tr	142	4165	32x6	32x6D
Reo F C	2	1645	Own	6	3 3/8x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	37.62	4	Tr	152	4025	32x6	32x6D
Reo F D	2	1745	Own	6	3 3/8x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	37.62	4	Tr	168	4075	32x6	32x6D

Major Specifications and Mechanical Details of 1930 Commercial Cars Built in the United States

Make and Model	Capacity—Tons	Chassis Price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gear Set	Location	No. Spds. For.	Rear Axle	Final Drive	Reduction in Low	Brakes, Foot	Brakes, Hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
Reo G A	3	2035	Own	6	3 3/8x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	41.05	4	Tr	163	4625	32x6	32x6D
Reo G C	3	2140	Own	6	3 3/8x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	41.05	4	Tr	179	4850	32x6	32x6D
Reo G D	3	1985	Own	6	3 3/8x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	46.2	4	Tr	144	4570	32x6	32x6D
Rugby ½ T	½	655	Con	6	3 1/4x4	25.4	Pb	Str	AC	Aut	Own	U	3	Own	Sp	15.6	4	4	——	2160	29x5	29x5
Rugby 6-15	1	865	Con	6	3 1/4x4	25.4	Pb	Str	AC	Aut	Br-L	U	4	Sal	Sp	34.49	4	Tr	135	2900	20x5.50	32x6
Selden 7 C	1	1098	Con	6	2 3/8x4 3/4	19.84	Pb	Zen	Vac	Aut	BB	U	3	Tim	Sp	—	4	D	124	3600	30x5	30x5
Selden 17 C	1½	1500	Con	6	3 3/8x4	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	142	3900	32x6	32x6
Selden 317 C	1½	3900	Con	6	3 3/8x4 5/8	27.34	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	142	3900	32x6	32x6
Selden 37 C	2	1935	Con	6	3 3/8x4 5/8	27.34	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	151	4800	32x6	32x6D
Selden 39 C	2½	2920	Con	6	4 x4 1/8	38.4	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	164	5800	32x6	32x6D
Selden 47 C B	3½	3785	Con	6	4 x4 1/2	38.4	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	171	7200	34x7	34x7D
Selden 47 C D	4	4435	Con	6	4 x4 1/2	38.4	Pb	Str	Vac	Aut	Br-L	U	5	Wis	2R	—	4	D	171	7600	36x8	36x8D
Selden 67 C	5	4975	Con	6	4 3/8x4 3/4	45.94	Pb	Str	Vac	Aut	Br-L	U	7	Wis	2R	—	4	D	171	8700	36x8	36x8D
Selden 77	7	7365	Con	6	4 3/4x5 3/4	54.15	Pb	Str	Vac	Aut	Br-L	U	7	Wis	2R	—	4	D	178	12000	36x7	40x7D
Service Series S 11	1	1600	Bud H S 6	6	3 3/8x4 1/2	27.3	PC	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.5	4	D	142	3900	P30x5	P30x5
Service Series S 11	1½	1900	Bud H S 6	6	3 3/8x4 1/2	27.3	PC	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4300	P30x5	DP30x5
Service Series 40	1½	2990	Bud D S 6	6	3 5/8x5	31.5	PC	Zen	Vac	Aut	Br-L	U	4	Tim	W	34.8	4	D	168	4700	P34x5	DP34x5
Service Series S 11	2	2030	Bud H S 6	6	3 3/8x4 1/2	27.3	PC	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4500	P32x6	DP32x6
Service Series 40	2	3240	Bud D S 6	6	3 5/8x5	31.5	PC	Zen	Vac	Aut	Br-L	U	4	Tim	W	34.8	4	D	168	4900	P36x6	DP36x6
Service Series 40	2½	3240	Bud D S 6	6	3 5/8x5	31.5	PC	Zen	Vac	Aut	Br-L	U	4	Tim	W	34.8	4	D	168	5100	P36x6	DP36x6
Service Series 60	2½	4580	Bud B U S	6	4 x5 1/8	38.4	PC	Zen	Vac	Aut	Br-L	U	5	Tim	W	63.0	4	D	175	7000	P36x6	DP36x6
Service Series 60	3	4680	Bud B U S	6	4 x5 1/8	38.4	PC	Zen	Vac	Aut	Br-L	U	5	Tim	W	63.0	4	D	175	7100	P36x6	DP38x7
Service Series 80	3½	5250	Bud B A 6	6	4 1/8x5 1/8	40.8	PC	Zen	Vac	Aut	Br-L	A	7	Tim	W	98.2	4	D	175	8200	S36x6	S36x12
Service Series 80	4	5330	Bud B A 6	6	4 1/8x5 1/8	40.8	PC	Zen	Vac	Aut	Br-L	A	7	Tim	W	98.2	4	D	175	8400	S36x6	S36x14
Service Series 100	5	5830	Bud B A 6	6	4 1/8x5 1/8	40.8	PC	Zen	Vac	Aut	Br-L	A	7	Tim	W	98.2	4	D	175	9600	S36x6	S40x14
Stewart 30	1	695	Lyc AFE	4	3 3/4x4 1/2	22.5	Pb	Str	Vac	DR	W-G	U	4	Sal	Sp	—	4	D	130	2905	6.50x20	6.50x20
Stewart 30 X	1	795	Lyc WRG	6	2 7/8x4 1/2	19.8	Pb	Str	Vac	DR	W-G	U	4	Sal	Sp	—	4	D	130	2965	6.50x20	6.50x20
*Stewart 16 A	1¼	1195	Lyc CT	4	3 3/4x5	22.5	Pb	Str	Vac	DR	W-G	U	4	Cla	Sp	24.0	4	D	130	3526	32x6	32x6
*Stewart 16 XA	1¼	1195	Lyc 4 SL	6	3 1/4x4 1/2	25.3	Pb	Str	Vac	DR	W-G	U	4	Cla	Sp	24.0	4	D	130	3526	32x6	32x6
Stewart 28 X	1½	1495	Lyc 4 SL	6	3 1/4x4 1/2	25.3	Pb	Str	Vac	DR	Ful	U	4	Cla	Sp	27.3	4	D	136	3840	30x5	30x5D
Stewart 29 X	2	1695	Lyc 4 SL	6	3 1/4x4 1/2	25.3	Pb	Str	Vac	DR	Ful	U	4	Cla	Sp	27.3	4	D	145	4188	32x6	32x6D
Stewart 26 X W	2	2290	Lyc TF	6	3 5/8x5	31.5	Pw	Str	Vac	DR	Ful	U	4	Tim	Wo	29.9	4	D	165	5095	32x6	32x6D
*Stewart 18 X	2½	2690	Lyc TF	6	3 5/8x5	31.5	Pw	Str	Vac	DR	Ful	U	4	Tim	Wo	29.0	4	D	165	5788	32x6	32x6D
Stewart 32 X	2½	1990	Lyc ASA	6	3 5/8x4 3/4	31.54	Pw	Str	Vac	DR	Ful	U	4	Cla	Sp	7.25:1	4	D	165	5100	32x6	32x6D
Stewart 33 X	3	3290	Lyc TS	6	3 7/8x5	36.2	Pw	Str	Vac	DR	Ful	U	4	Tim	Wo	7.25:1	4	D	165	6450	34x7	34x7D
Stewart 19 X	3½	3690	Lyc TS	6	3 7/8x5	36.2	Pw	Str	Vac	DR	Ful	C	12	Tim	Wo	105.1	4	D	165	6990	36x5	36x10
Stewart 31 X	5	4990	Wak 6 RSL	6	4 5/8x5 1/8	45.9	Pw	Str	Vac	DR	Ful	C	8	Tim	Wo	10.5:1	4	D	165	8400	36x6S	36x6SD
Stewart 27 X	6-7	5700	Wak 6 RSL	6	4 3/8x5 1/8	45.99	Pw	Str	Vac	DR	Ful	U	8	Tim	Wo	93.81	4	D	165	9927	36x7	40x7D
Studebaker GN-P	¾	845	Own	8	3 1/2x4 3/8	39.2	Pb	Str	P	DR	Own	U	3	Own	Sp	15.15	4	4	146	3265	30x5	32x6
Studebaker GN-S	1	1045	Own	6	3 3/8x4 1/8	27.3	Pb	Str	P	DR	Own	U	3	Own	Sp	13.8	4	D	158	5030	7.00x20	7.00x20D
Studebaker GK-N	1	1095	Own	6	3 3/8x4 1/8	27.3	Pb	Str	P	DR	Own	U	3	Own	Sp	13.8	4	D	184	5200	7.50x20	7.50x20D
Studebaker GN-N	*4000	1245	Own	6	3 3/8x4 5/8	27.3	Pb	Str	P	DR	Cla	U	4	Cla	Sp	33.5	4	D	184	5680	7.50x20	7.50x20D
Studebaker 77	*12500	2895	Own	6	3 3/8x4 1/4	27.3	Pb	Str	P	DR	Ful	U	4	Eat	Sp	24.6	4V	D	115	2465	6.00x19	6.00x19
Studebaker 88	*12500	3295	Own	8	3 1/2x4 3/8	39.2	Pb	Str	P	DR	Ful	U	4	Eat	Sp	24.6	4V	D	130	2990	6.00x20	30x5
Studebaker 99	*14000	3795	Own	8	3 1/2x4 3/8	39.2	Pb	Str	P	DR	Ful	U	4	Eat	Sp	24.6	4V	D	146	2955	30x5	30x5
Whippet 96 A	½	360	Own 96 A	4	3 1/8x4 3/4	15.6	Pb	Til	Vac	Aut	Own	U	3	Own	Sp	14.74	4	R	103¼	1691	28x4.75	28x4.75
Willys Six 98 B	½	525	Own 98 B	6	3 1/4x3 7/8	25.35	Pb	Til	Vac	Aut	Own	U	3	Own	Sp	13.43	4	B	110	1903	29x5.00	29x5.00
Willys Six C-101	1½	695	Own 98 B	6	3 1/4x3 7/8	25.35	Pb	Til	Vac	Aut	Ful Wo	U	4	Cla	Sp	33.51	4	R	131	2675	30x5	30x5
†White 15 B	1	1545	Own GKA	4	3 3/4x5 1/8	22.5	CS	Zen	Vac	L-N	Own	C	4	Own	Sp	18.6	R	R	133½	3242	30x5	30x5
†White 57	1¼	2725	Own GRC	4	4 x5 3/4	25.6	Pw	Zen	Vac	L-N	Own	U	4	Own	Sp	19.3	R	R	146	3755	32x6	32x6
†White 20 A	1½	2125	Own GKA	4	3 3/4x5 1/8	22.5	CS	Zen	Vac	L-N	Own	C	4	Own	2R	32.1	R	R	145½	4412	34x5	34x5DP
†White 56	2	3125	Own GRC	4	4 x5 3/4	25.6	Pw	Zen	Vac	Mag	Own	U	4	Own	Sp	26.2	R	D	165	5096	36x4S	36x7S
†White 51 A	2½	3750	Own GRB	4	4 1/4x5 3/4	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	Sp	35.5	R	D	170	6256	36x5S	36x8S
†White 55	3½	4650	Own GRB	4	4 1/4x5 3/4	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	IG	66.1	D	R	174	8512	36x5S	40x5SD
†White 52 T	3½	4700	Own GRB	4	4 1/4x5 3/4	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	IG	76.5	D	R	129½	8236	36x5S	40x5SD
†White 52	5	5100	Own GRB	4	4 1/4x5 3/4	28.9	Pw	Zen	Vac	Mag	Own	U	5	Own	IG	92.3	D	R	174	9184	36x6S	40x12S
††White 58	3	4400	Own GRB	4	4 1/4x5 3/4	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	IG	49.7	4	R	180	7535	36x5S	36x5SD
†White 60	1	1850	Own 2 A	6	3 1/2x4 1/2	29.4	Pw	Zen	Vac	DR	Own	U	3	Own	Sp	17.9	4	D	138	3562	30x5	30x5
†White 61	1½	2450	Own 2 A	6	3 1/2x4 1/2	29.4	Pw	Zen	Vac	DR	Own	U	4	Own	Sp	23.4	4	D	148	4612	30x5	30x5D
†White 59 A	7½	6000	Own 3 A	6	4 x5 1/4	38.4	Pw	Zen	P	L-N	Own	U	4	Own	Sp	66.5	D	R	155 1/8	——	40x8	40x14S
Willys-Knight T-103	1½	825	Own KGT	6	2 1/2x4 3/4	20.7	Pb	Til	Vac	Aut	Ful Wo	U	4	Cla	Sp	39.27	4	B	131	2808	30x5	30x5
Willys-Knight 20	2	1945	Own KGT	6	3 3/8x4 3/4	27.3	Pw	Til	Vac	Aut	Ful KU	U	4	Eat	Sp	40.74	4	R	150	3800	32x6	34x7
Willys-Knight 21	2	1995	Own KGT	6	3 3/8x4 3/4	27.3	Pw	Til	Vac	Aut	Ful KU	U	4	Eat	Sp	40.74	4	R	164	3900	32x6	34x7
Willys-Knight 25	2½	2545	Own KGT	6	3 3/8x4 3/4	27.3	Pw	Til	Vac	Aut	Ful GU	U	4	Wis	2R	30.45	4	R	150	4920	32x6	32x6D
Willys-Knight 26	2½	2595	Own KGT	6	3 3/8x4 3/4	27.3	Pw	Til	Vac	Aut	Ful GU	U	4	Wis	2R	30.45	4	R	164	5020	32x6	32x6D

GENERAL NOTATIONS

*††REFERENCE MARKS apply to individual lines only and explanations are given under the subdivision for each company in the "SPECIAL NOTATIONS."

CAPACITIES given in this table are in tons or fractions of tons. *Shows maximum allowable gross weight in pounds.

WHEEL BASES given are standard, but optional wheel bases are available in many cases.

ENGINE—Bud, Buda; Con., Continental; Her, Hercules; Kgt, Knight; Lyc, Lycoming; Wak Waukesha; Wis, Wisconsin.

LUBRICATION—Pb, pressure lubrication to main and connecting rod bearings; Pw, full pressure lubrication to all bearings, including wrist-pins; CS, circulating splash; Sp, Splash.

CARBURETOR—Car, Carter; Joh, Johnson; Mar, Marvel; Sch, Wheeler-Schebler; Str, Stromberg; Stw, Detroit lubricator; Til, Tillotson; Zen, Zenith-Detroit.

FUEL FEED—Gra, Gravity; Pre, Pressure; Vac, Vacuum; tank; P, Fuel pump.

IGNITION—AB, American-Bosch; Aut, Electric Auto-Lite; Eis, Eisemann; L-N, Leece-Neville; N-E, North East; RB, Robert Bosch; D R, Delco-Remy.

TRANSMISSION—Br, L, Brown-Lipe; Cov, Covert; Ful, Fuller; Mec, Mechanics Machine; Mun, Muncie; W-G, Warner Gear.

LOCATION—C Center, Amid; U, in unit with engine.

REAR AXLE—Cla, Clark Equipment; Col, Columbia; Eat, Eaton; Sal, Salisbury; Tim, Timken, Wis, Wisconsin.

FINAL DRIVE—IG, Internal gear; St, Straight bevel; Sp, Spiral bevel; Wo, Worm; 2R, Double reduction; Ch, Chain; Relay, Relay drive.

BRAKES—Js, Jack shaft; R, Rear wheels; D, Drive shaft; 4, four-wheel; Tr, Transmission; W Westinghouse air brake.

B, Both front and rear wheels.

TIRES—B, Balloon; D, Dual; S, Solid.

SPECIAL NOTATIONS

AMERICAN-LA FRANCE

*Chief model also available as 2½-ton model, 34x7 tire, dual rear, weight 6,400. Price $3,900.

Chieftain model also available as Dump Truck, 169-inch wheel base.

Balloon tires optional on Chief, Chieftain and Big Chief models.

AUTOCAR

†Engines in these models are located under the driver's seat.

DAY-ELDER

Models GF and HF also available in 186-inch wheel base.

Model JF also available in the following wheel bases: 165, 180 and 204 inches.

Model KF also available in 202-inch wheel base and tractor 149.

DURANT LINE

*Price includes panel body.

GENERAL MOTORS TRUCK LINE

*Capacity indicated for each chassis is the recommended gross weight without exceeding rated capacity of tires. The tire size does not affect the straight rating for which chassis is guaranteed and each model is designed to operate satisfactorily under average conditions with loads giving a total gross weight chassis, body, equipment and payload, equal to straight rating given below. The additional standard wheel base lengths, the number of additional tire types (tire combinations—each type carrying a recommended gross weight) and the ton range on a nominal payload basis for each model is given below.

Model	Straight Rating	Additional Wh. Bases, ins.	Addit'l Tire Types	Pay'd Range
T-11	3800	None	None	½
T-15	5400	141	2	¾
T-17	6500	141	6	¾-1¼
T-19	8500	141, 152	16	1-2
T-25	8500	141, 152	11	1-1¾
T-30	11000	152, 164	12	1½-2½
T-42	14000	152, 164, 181	10	2-3½
T-44	15000	152, 164, 181	10	2-4
T-60	18500	166¾, 184½, 200¼	16	2½-4½
T-82	22000	167½, 185½, 201	10	3-6
T-90	28000	201, 220	5	5-7½

Optional rear axle ratios are available for all models.

F. W. D.

*Indicates six-wheel model. Special power take-off transmission, which provides 3 power take offs which may be operated in any transmission speed, optional on all models.

GRAMM

*Models B, C, D and E are furnished in three wheel base lengths—others on request.

*Models GY and GYB also available in 190-inch wheel base.

*Models HY and HYB also available in 210-inch wheel base.
Tire sizes and electrical equipment optional, depending upon type of service—coach or van.

*Model O Series, Large engine, pneumatic tires, special wheel bases optional at extra cost

*Model T Series, Large engine, pneumatic tires, special wheel bases and 8 speed transmission optional at extra cost.

MACK LINE

Other wheel bases furnished on all truck models.

On 6-wheel jobs 4 rear wheels driven by chains, foot brake on 4 rear wheels.

HYP—Hypoid drive, single reduction.

††Made also in tractor models.

REO LINE

RD2, at $5,450 on 180-inch wheel base.

*Tonner in wheel base, 123, 138; 1½-ton in wheel base, 137, 156, 152; 2-ton in wheel base, 152, 168; 3-ton in wheel base, 168, 179, 184.

RUGBY

F—Chassis weight includes body.

STEWART LINE

Model 30 and 30X can also be supplied in 120 and 140-inch wheel base.

*Models 16A and 16XA can be supplied in 145-inch and 160-inch wheel base.

Model 28X can be supplied in 145, 160 and 176-inch wheel base.

Model 29X can be supplied in 160 and 176-inch wheel base.

*Model 26XW can be supplied in 148, 176 and 190-inch wheel base.

*Models 18X, 32X and 33X can be supplied in 148, 190 and 220-inch wheel base.

*Models 19X, 31X and 27X can be supplied in 148, 172, 190, 220 and 235-inch wheel base.

STUDEBAKER LINE

*Capacity Model GN-N is 4,000 lbs. for body, cab, driver and payload.

Maximum gross load, chassis, body and payload for Models 77 and 88 is 12,500 lbs. and for Model 99 is 14,000 lbs.

†Hand brake same as foot brake, standard. Hand brake on drive shaft, special equipment.

Dealer Activities

Waterbury, Conn., May 1.—Wenzel & Collins, Inc., Chrysler and Plymouth dealer, will move into its new building at 14-16 Grove St. May 15. The dealership is now located at 495 Meadow St.

Newark, N. J., May 1.—Herdman Motor Company of Central Avenue, direct factory representative of Chevrolet, has greatly increased its service facilities by alloting several thousand additional square feet of space to the service department. A complete Duco refinishing plant has been installed, and the services of several expert body and fender refinishers acquired.

Sumner, Wash., May 1.—A. A. Hatfield, who has been associated with the E. L. Risley Motor Company here for the last year, has purchased the Risley used car establishment and will operate it hereafter under his own name.

Rochester, N. Y., May 1.—The Sweeney Chevrolet Corporation has been organized and incorporated to establish and operate a Chevrolet sales and service in this city. Principals of the new enterprise are James F. Sweeney, 492 Goodman St., and James A. Ryan, 927 Mercantile Building.

Newark, N. J., May 1.—The Newark branch of the Glidden Buick Corporation, known as the Newark Buick Corporation, has moved to new quartersat 198 Central Ave. Growing demand for Buick sales and service has necessitated the abandoning of the old quarters at 497 Broad St., where the local branch had been located for the last ten years. Buick will have 50,000 feet of floor space o nthree floors in the Central Avenue building, nearly again as much as in the old quarters, and the accessibility and parking facilities are much greater than at the old stand.

Indianapolis, Ind., May 1.—Incorporated papers have been filed with the state by the Delaware Motor Inn, Inc., which will erect a new parking garage and service station in the downtown district here. E. B. Hair, T. B. Rogers and D. F. Ewing are at the head of the new corporation.

Newark, N. J., May 1.—L. L. Lawrence, president of the Lawrence Motor Car Company, Newark, Auburn and Ford distributor for New Jersey, announces the appointment of the Court House Garage, Inc., 32 Rahway Ave., Elizabeth, as an Auburn and Cord dealer.

Richmond, Va., May 1 (UTPS).—The Motor Sales and Supply Company of 1633 West Broad St., this city, has been appointed Nash distributor for the territory. W. E. Burroughs is manager of the company.

Port Angeles, Wash., May 1.—The H. T. Swanson Motor Company, Studebaker and Erskine dealer here, has been appointed Pierce Arrow distributor for Clallam and Jefferson counties, according to Herman T. Swanson, manager.

Production--Engineering--Factory

Modern Trends in Making Automobile Lubricants

Automotive Daily News presents herewith the second installment of a paper prepared by D. G. Brandt of Henry L. Doherty & Co., covering the "Modern Trends in the Manufacture of Motor Lubricants." This paper was presented by Mr. Brandt last week at the semi-annual meeting of the National Petroleum Association at Cleveland, O.

Fundamentally, the lubricating oil in an engine performs three major functions: First, lubricating the moving parts; second, sealing the pistons, and, third, cooling. First, from the standpoint of lubrication of moving parts, it may be pointed out that in the development of other sigh-speed machinery the trend has been toward a lubricant of lower viscosity.

For high-speed machinery operated at constant speeds, the selection of a proper lubricant is relatively simple, but in the case of the present-day automobile engine, operated at a wide range of speeds, the selection is not so easy. The selection, however, should be made so that at slow speeds lubrication will be stable and the coefficient of friction low. This would necessarily make the coefficient of friction greater at high speeds, but, in order to secure stable lubrication at all speeds, some efficiency must necessarily be sacrificed. From this reasoning it is evident that the proper oil for lubricating purposes does not need to be extremely viscous, and that the heavy oils now being used were selected for other reasons.

Considering the second function mentioned, it must be borne in mind that difficulty in securing a satisfactory piston seal would be a direct result of the greater operating range of the machines and the higher compression ratios. It has already been mentioned that, although the approximate driving speed on the open road has risen as high as fifty miles an hour, the usual driving speed, because of traffic conditions, is not materially higher than it has been in the past, and the percentage of idling time has increased. Confronted with this condition, we find that, when operating at low speeds, a decided vacuum is created in the cylinders on the intake stroke and that some of the lubricant is drawn into the cylinder, although the seal is not broken. Likewise, when operating at high speeds, difficulty is also encountered in the loss of lubricant. However, in this case the difficulty results from the higher temperature of the cylinder walls and the reduced viscosity of the lubricating oil film forming the piston seal. At the higher speeds the piston ring does not wipe the wall entirely clean on the down stroke, and on the compression stroke this oil is carried into the combustion space by the piston.

In the case of the older engines, the normal operating speed was closer to the maximum operating speed, and the difference in cylinder and crank case pressures was not so pronounced. Likewise, inasmuch as operating speeds were lower, temperatures were not so high and the securing of an effective piston seal, even with the less viscous oils, was not difficult.

The rapid loss of viscosity with temperature should receive considerable attention, for although there is very little information available as to piston working barrel temperatures, it is not unreasonable to assume that they are as high as 430 degrees Fahrenheit. If the absolute viscosity of an oil is plotted against temperature on logarithmic paper, a straight line is secured. If the lines of three lubricants of different viscosities, but from the same crude oil base, such as of S. A. E., 30, 40 and 50 viscosity range are plotted, it will be found that the lines converge at the higher temperatures indicating that lubricants having a wide variation in viscosity at test temperatures have substantially no difference in viscosity at high temperatures. Thus, I believe that a more effective seal could be produced by the reduction of the operating temperature of the lubricant than by increasing its viscosity as measured at the usual temperatures.

The third duty of an automobile lubricant is the cooling of bearings and moving parts. Under present conditions, the temperature of the crank case rises from the starting temperature to an average of from 130 to 150 degrees Fahrenheit. Increased engine speeds and bearing pressures have made the splash system of lubrication inadequate, and practically all manufacturers have adopted forced feed lubrication, or what might be more correctly termed forced oil circulation, to supplement the splash system. The oil is pumped from the crank case through the bearings back to the oil pan, where the only means of cooling is by radiation. If the oil pan were insulated and a cooler installed in the oil pump discharge line, more adequate cooling could be provided which would somewhat compensate for the wide range of climatic conditions and driving speeds.

As previously mentioned, the automobile manufacturer has endeavored to extend the life of the lubricant and maintain the original viscosity, but very little attention has been given to temperature control of the lubricant necessary to maintain a constant viscosity under operating conditions. This could be accomplished by an independent controlled cooling system with several resulting advantages. First, by supplying precooled oil to the bearings for cooling, the quantity of oil circulated could be reduced. Second, it would be possible to use a cooled lubricant of lower viscosity for lubrication and reduce the friction of the moving parts. Third, if a forced supply of precooled lubricant with constant circulation or replacement was supplied for sealing the pistons, an effective seal could be secured with an oil of relatively low viscosity at test temperatures because of the reduced temperature.

From this it is evident that if the proper provisions were made for temperature control of the lubricant it would be possible to use a less viscous oil than that now in use and at the same time increase the efficiency of lubrication. It is a well-known fact that starting and lubricating troubles at low temperatures decrease with decreased viscosities of lubricants. It is also true that the carbon residue decreases with decreased viscosity. Hence, I believe that the automobile engine can be most efficiently lubricated by the use of a less viscous oil and equipment to maintain the viscosity constant by means of temperature control.

It is my opinion that the trend will be toward lubricants of lower viscosities, lower pour points and having as flat a temperature viscosity curve as possible, but lower viscosities will only be used after the engine manufacturer has installed temperature regulation in the lubricating system. In manufacture of such high quality lubricating oils, selection of the proper crude oil is of major importance. Crude oil is classified into three divisions, namely, asphalt base, paraffin base and mixed base. The last mentioned is a mixture of the first two, and its physical and chemical properties will approach either those of asphalt base or paraffin base, depending on the relative percentage of the two substances present in the crude.

An inherent characteristic of lubricants prepared from asphalt base crudes is the low cold test that may be obtained without special processing. However, the slopes of their temperature—viscosity curves are steep and at pour point temperatures they deviate widely from the laws of viscous flow. Their volatility is high, with a low carbon residue, for this reason. On the other hand, we find that without special processing the paraffin base oil solidifies at frigid temperatures because of the precipitation of wax. With special processing, however, it is possible to obtain a product having a cold test equivalent to that of asphalt base oils. The lubricant prepared in this manner follows the laws of viscous flow more closely at pour point temperatures than the asphalt base lubricants, although there is some divergence. The volatility of the paraffin base lubricant is lower and the carbon residue is higher than in the case of lubricants of the same viscosities prepared from asphalt base crudes. A marked characteristic is the relatively flat temperature - viscosity curve of the paraffin base oil.

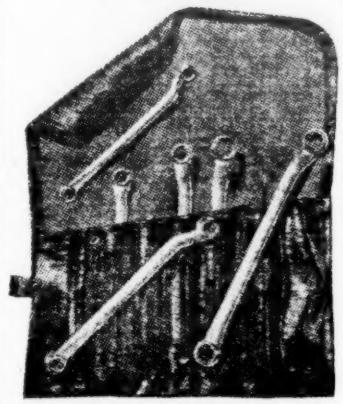
(To Be Concluded.)

A sound investment—Wisconsin Axles; with an uninterrupted record of dividends in low upkeep, freedom from trouble, bigger profits.

WISCONSIN AXLES

WISCONSIN AXLE CO.
Oshkosh Wisconsin

Blackhawk Mfg. Offers New Box Type Wrench Assortment

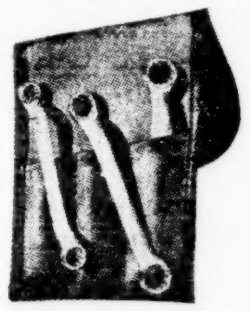


New balance and lightness in design. That's Blackhawk's new box type wrenches, smoothly finished oval handles, comfortable and easy to grip. Improved broaching of the double hex openings and slim heads to get into close quarters and over or under obstructions with the mechanic who knows his stuff.

The trim chrome vanadium chromium plated box types in the sizes required by every automotive mechanic are compactly and neatly arranged in a two-tone leatherette case which will last indefinitely.

The new 2900 Blackhawk wrench set is made up of six of the single off-set type wrenches with the same size socket opening at each end of the wrench. Sizes in the 2900 set include: 7 16 inch, 1/2 inch, 9 16 inch, 5/8 inch, 11 16 inch and 3/4 inch.

The new 2702 set comprises three tools, light and extremely short for automotive and aeronautical work in close quarters. These wrenches include the five most popular sizes



in double hexagons. They are double off-set with different openings at each end of the handle. The openings included in this set are 5/8-inch, 7/16-inch, 1/2-inch, 7/16-inch and 5/8-inch.

The set is complete in an attractive, durable leatherette roll that fits the pocket.

The 2702 set complete lists at $5.20, the 2900 set lists at $14.60.

Manufacturer announces that mechanics may obtain complete information on these sets and other Blackhawk wrenches by writing for the 1930 Handy Guide for Mechanics, a manual of complete wrench information, by the Blackhawk Manufacturing company. This booklet covers the chrome vanadium chromium plated line of socket wrenches, the satin-black line of socket wrenches and the complete line of open end wrenches.

Toledo Scale Company Develops New Spring Testing Gauge

A NEW development of interest to automobile manufacturers is an improved chassis spring testing automobile gauge, announced by the Toledo Scale Company. It measures the force necessary to deflect the spring a certain standard distance.

This device brings to the automotive industry many advantages over other types of spring-testing equipment. Two of these scales are installed in the plant of a prominent automobile manufacturer and the actual performance of these devices on the job has clearly brought out these profit-producing features.

This chassic spring-testing automobile gauge has the advantage of greater speed of operation. Two hundred and seventy-five springs can be tested in an hour. Because of this fact this device can be placed in the production line and each spring tested without slowing up opera-

This device is compact. It occupies only a small amount of floor space, which makes it easily adaptable to any plant lay-out conveniently, with little change. Being a self-contained unit, entirely separate from other equipment, it is easily moved from one position to another without the necessity of disconnecting or moving other equipment.

Greater ease and accuracy in reading the dial indication is provided by the nearness of the dial to the operator. Large, clear figures and widely spaced graduations on the dial are other factors in the rapid and accurate test of springs. Protection of the vital parts of the mechanism from collection of dust and dirt is effected because they are completely inclosed.

PIPE COATING TESTS TO START IN JUNE

NEW YORK, May 1.—Work on the proposed tests of pipe line coatings to be conducted jointly by the United States Bureau of Standards, the American Petroleum Institue and the newly organized Underground Pipe Protection Institute, which represents coating manufacturers, is expected to be under way in the field by June, it was learned here. The tests will be substantially in accord with the revised tentative plans by the Bureau of Standards on January 24.

All coatings will be applied, to three-inch pipe two feet in length. Fifteen suitable sites will be selected for burying the coated specimens. In order to correlate the corrosive effective on the nipples with that on operating oil lines, twenty treatments will be applied to such lines, and will be repeated in ten of the fifteen locations. In the case of line treatments, heavier coatings will be allocated to the more corrosive sites.

Coated nipples are to be prepared and handled at one or more central points under direction of the manufacturers' representatives in accordance with methods used in American Gas Association tests. Pipes on which treatments are to be applied will be mechanically cleaned.

Negotiations are under way to establish central coating points at Pittsburgh, Tulsa and on the Pacific Coast. In cases where special difficulty movable coating machinery is used supervision of application at the coating manufacturer's plant will be arranged.

A fee of $275 will be charged for each coating submitted, the fee to be used to defray expenses. Fifty acceptable specimens of each coating are to be prepared for distribution, three to each of the fifteen locations and five to the bureau.

Trucks and Tractors Handle 36% of All Farm Work in U.S., Says Sneathen

THIRTY-SIX per cent. of all the work done on farms in the United States during 1929 was performed by trucks and tractors, according to a statement issued by Howard E. Sneathen, manager of truck sales for the Dodge Brothers Corporation.

"This compares with 18 per cent. of farm work performed by trucks and tractors in 1924," Mr. Sneathen continued. "In other words, the use of trucks and tractors on American farms during the last five years has increased 100 per cent.

"It is interesting to view the motorization of the modern farm in terms of horse-power hours rather than by the number of motor-power units. The trend towards power equipment for farm work is plainly shown in figures produced by the American Research Foundation survey, recording that in 1924 trucks and tractors performed 2,950,000,000 horse-power hours, as compared with 6,700,000,000 in 1929.

"The steadily increasing versatility of the truck and tractor and the ability of these two units to do more of the farm work is indicated by the fact that in 1924 power equipment other than trucks and tractors performed 4,030,000,000 horse-power hours, while in 1929 this figure had dropped to 3,630,000,000.

"Figuring on the basis of horse-power hours, the east-north-central States, composed of Ohio, Indiana, Illinois, Michigan and Wisconsin, lead in the use of trucks and tractors. The American Research Foundation figures show that 51 per cent. of the total horse-power work on farms is performed with this kind of equipment.

"The south Atlantic states rank second with 49 per cent.; the New England States come next with 46 per cent., although the actual work done on farms is smaller than any other section of the United States. The Pacific Coast states of Washington, Oregon and California, according to this method of computing, rank fourth with 44 per cent., and the middle Atlantic States rank fifth with 43 per cent."

GRAHAM EIGHT SETS NEW SPEED RECORD IN ENGLAND

Detroit, May 1.—Driving the same four-speed Graham eight sedan in which he established the 1929 record for cars of this class at the Brooklands, England, track, D. M. K. Marendaz recently broke his own record on the same track, he has notified the Graham factory.

CLARK

SPEED TRUCKS require light strong wheels and single-reduction bevel-gear axles. Outstanding popularity in this field has been won — deservedly — by

CLARK AXLES and METAL WHEELS

CLARK EQUIPMENT COMPANY
Buchanan Michigan

AXLES
Front & Rear
WHEELS
Single or Dual Tire
CAST STEEL HOUSINGS
TRANSMISSIONS

Financial News: Range of Automotive Stocks

Studebaker's Net Profit For Quarter Is $1,492,137

NEW YORK, May 1.—The report of Studebaker Corporation and subsidiaries, including Pierce-Arrow Motor Car Company, for the quarter ended March 31, 1930, shows consolidated net profit of $1,492,137 after depreciation, interest, Federal taxes, etc., equivalent, after deduction of Pierce-Arrow Class A minority interest, Studebaker Corporation preferred dividends and preferred dividends of Pierce-Arrow Motor Car Company, to 62 cents a share on 1,961,413 no-par shares of common stock outstanding on March 31, last.

This compares with net profit of $5,033,589 in first quarter of 1929, equal to $2.57 a share on 1,893,750 common shares then outstanding.

Consolidated statement of Studebaker Corporation and subsidiaries, including Pierce-Arrow Motor Car Company, as of March 31, 1930, shows total assets of $134,632,552, comparing with $134,207,322 on December 31, 1929, and surplus of $29,335,303, against $30,561,767. Current assets totaled $37,610,230 and current liabilities $11,827,009, comparing with $36,327,255 and $9,987,724, respectively, on December 31, 1929.

In connection with the reduction of the quarterly dividend from $1.25 to $1, A. R. Erskine, president, stated:

"Conservative dividend disbursements seem advisable this year owing to the restricted volume of available business and the consequent decline in our profits.

"While consumer buying of new passenger cars in the first quarter this year, as shown by the registration figures of the different states, shows declines running from 11 per cent. to 58 per cent., except in the cases to several models which show increases, including two of the lowest priced makes, Studebaker and Erskine models decreased only 30.2 per cent., while Pierce-Arrow showed a gain of 66.7 per cent. and led the industry. Exports of American cars showed a decline of about 50 per cent., as compared with the first quarter of last year.

"Notwithstanding the severe drop in current business and the abnormal condition of unemployment, a hopeful and highly significant sign of the situation is the fact that the past due instalment paper of over 400 national finance companies is up only 3 per cent. This indicates the importance and necessity of individual and personal transportation facilities ingrained in the economic and social structure of the nation. People cannot give up their cars because the horse has gone forever from our streets and highways."

General Motors Awards $8,000,000 Stock Bonuses

(Continued from Page 1)

annual report of each of the ensuing years, no further statement need be made at this time. Attention, however, is called to the fact that the contractual relationship between Managers Securities Company and the corporation terminates at the end of the year 1930, by limitation. Attention is also called to the fact that on May 11, 1927, stockholders approved a plan which provided for the purchase, over a period of years, stock by the corporation, to be available for a second plan of similar character at the expiration of the present Managers Securities Company plan.

"In view of the fact that during the past few years the business of the corporation has expanded very greatly, its organization likewise has necessarily expanded. Very careful consideration was given, therefore, during the year under review to the importance of providing an opportunity similar to the Managers Securities plan, not only for the larger group of executives resulting from the expanded business, but for changes which, through evolution, have taken place during the intervening years.

"This problem will be solved through the termination of the contract with Managers Securities Company as of December 31, 1929, which can be done with equity to all concerned, and by the adoption of a plan which has been developed to include additional members of the corporation's organization who should come within its scope. The proposed plan, known as the General Motors Management Corporation plan, as approved by the directors on February 6, 1930, was submitted to the stockholders and approved by them at a special stockholders' meeting on March 5, 1930.

"Attention is called to the fact that there was available, in accordance with the authority granted under date of May 11, 1927, above noted, including as well certain other shares in the treasury likewise available for the purpose above stated, approximately 1,385,000 shares of General Motors common stock as of December 31, 1929, which it is proposed to sell to the General Motors Management Corporation at $40 per share."

Under the operations of the group insurance plan, which was started in 1926 to provide employees with life insurance and amended in 1928 to include accident and health provisions, the corporation in 1929 paid $2,636,301 to employees or their dependents. The corporation lost 1,496 employees during the year through death or permanent disability.

In addition to the life insurance paid, 22,518 employees received benefits amounting to $1,541,789 on account of temporary disability resulting from sickness or non-industrial accidents, bringing the total benefits to $4,178,090 for the year.

The plan is available to all employees of the corporation after three months' service. At the end of 1929 more than 99 per cent. of the eligible employees were participating.

Mr. Sloan also outlined the operation of the preferred stock plan in 1929. This plan, inaugurated in 1924, recognized the importance of affording a suitable investment for the corporation's employees, particularly those unfamiliar with the selection of securities for investment. Preferred stock may be subscribed to in limited quantities and paid for through monthly installments over a period of one year.

As a special inducement the corporation makes an extra payment of $2 per share each year for a period of five years to the employees availing themselves of this offer. Three thousand and sixty-six employes purchased 13,538 shares of the preferred stock under this plan last year.

In regard to the executive educational work, Mr. Sloan said:

"Previous reports have dealt with this activity. Its importance to the corporation's future is very great. There have been no important modifications in the various phases of this activity during the year. Progress is being made and the results obtained justify what has been done."

Mr. Sloan made the following statement in regard to the corporation's development of housing for employes:

"The policy previously reported continues. As stated in previous annual reports, certain activities have been inaugurated separately to handle this phase of the corporation's work. They are as follows: Modern Housing Corporation; Modern Dwellings, Limited; Bristol Realty Company and New Departure Realty Company. There has been no increase during the year under review in the corporation's investment in these activities. Since this plan was inaugurated, 34,800 employees have utilized it to assist in the buying and building of homes. Attention is called to the fact that the assets of these companies are not consolidated in the balance sheet of the corporation, but the latter's investment in the same is included in the investment in subsidiary and affiliated companies not consolidated as shown on page 23.

OTHER FINANCIAL NEWS

U. S. RUBBER

Kuhn, Loeb & Co. have purchased from the United States Rubber Company $15,000,000 6 per cent. three-year secured gold notes dated June 1, 1930, due June 1, 1933, which they are offering subject to prior sale at 99 per cent. and accrued interest to yield 6⅜ per cent. to maturity.

The proceeds of the sale of these notes are to be applied toward the payment at maturity on August 1, 1930, of $18,336,000 of the company's ten-year 7½ per cent. secured gold notes maturing on that date, thereby reducing the fixed interest charges of the company by $475,200 per annum. The balance required is to be paid from available treasury funds.

WINTON ENGINE

The Winton Engine Company reports for the quarter ended March 31, 1930, net profit of $162,528 after charges and Federal taxes, equivalent to $1.71 a share on 95,000 combined shares of no-par preferred and common stocks. This compares with $169,901, or $1.78 a share on the above share basis, in the first quarter of 1929.

INLAND STEEL

The Inland Steel Company and subsidiaries report for the quarter ended March 31, 1930, net profit of $2,721,318 after interest, Federal taxes, depreciation and depletion, equivalent to $2.26 a share on 1,200,000 no-par shares of stock. This compares with $3,007,242, or $2.50 a share, in first quarter of 1929. The company declared the regular quarterly dividend of $1 on common, payable June 2 to stock of record May 15.

NEW YORK CURB EXCHANGE

Sales		High	Low	Close	Net Chge
28500	Cities Service	42	41¼	41½	+ ⅜
400	do pf	92¾	92½	92¾	— ¼
	Cont Dia Fibre		No sales		
3300	Cord Corp	13	12¾	13	...
	Doehler D C		No sales		
200	Durant Motor	5⅛	5⅛	5⅛	+ ⅛
	Fageol Motor		No sales		
	Fedders		No sales		
	Federal Mogul		No sales		
	Federal Screw		No sales		
2200	Fiat Am rcpt	22½	21⅜	22½	+ 1⅛
3300	Ford Canada A	36¾	35⅝	36¼	+ ⅜
1500	Ford France	11¼	11¼	11¼	— ⅜
4900	Ford Ltd	18½	18¼	18½	— ¼
	Franklin Mfg		No sales		
10	Gen Tire & Rub	149	149	149	...
	Grn'f'ld T & D		No sales		
	Hall Lamp		No sales		
	Henney		No sales		
	Hood Rubber		No sales		
	India Tire		No sales		
	Isotta Fras		No sales		
	Jaeger		No sales		
300	Lakey	7	7	7	— ⅛
	McQuay Norris		No sales		
100	Nat Rub Mach	21	21	21	...
800	Paramount Cab	6¾	6½	6¾	— ¼
	Perfect Circle		No sales		
	Pines Winter		No sales		
	Pitt Pl Glass		No sales		
	Rolls Royce Am		No sales		
	Ross Gear		No sales		
	Safe T Stat		No sales		
1600	Seiberling	9	8	8	—1
80	Smith A O	239	234	237	+ 2¾
	Sparks With		No sales		
1000	Stutz Motor	2⅞	2⅝	2⅝	— ¼
2100	Thermoid Co	26¼	25¾	26¼	+ ¼
200	Triplex	9⅜	9⅜	9⅜	+ 1⅛
	Tung Sol		No sales		
	U S Asbestos		No sales		
	Watson, J W		No sales		
	Wayne Pump		No sales		
	West Auto		No sales		
	Yellow Taxi N Y		No sales		

NEW YORK OVER-THE-COUNTER

Div.		Bid	Asked
6	American Hard Rubber	67	72
....	Dixon (J) Crucible	170	175
3.50	Doehler Die Casting	37½	..
7	do pf	85	..
....	Eisemann Magneto	22	..
7	do pf	95	..
....	Rolls Royce America	..	13
....	Splitdorf Beth Elec	4¾	5

CHICAGO STOCK EXCHANGE

Sales		High	Low	Last
200	Allied Motor Ind	15½	15	15⅜
100	Allied Products	40	40	40
350	Auburn Auto	231	229	230
4350	Bendix Aviation	44¾	43⅝	44½
4950	Borg-Warner	41½	40½	41
150	Chicago Yellow Cab	28¾	28¾	28¾
8400	Cord Corp	13¼	12⅞	13⅛
200	Houdaille Hershey A	24⅞	24½	24½
650	do B	21¼	20⅝	20¾
1850	Modine	68¼	66	68¼
300	Mohawk Rubber	11	10½	10½
100	Muncie Gear A	6	6	6
150	do B	5⅛	5	5
250	Muskegon M S	20⅞	20½	20¾
100	Noblitt Sparks	50⅞	50⅞	50⅞
100	Perfect Circle	40	39½	40
450	Pines Winterfront	37	35	36½
1000	Ross Gear	33½	31½	33½

CLEVELAND STOCK EXCHANGE

Sales		High	Low	Last
25	Firestone pf	82	82	82
10	General Tire	148	148	148
20	Goodyear pf	101¾	101¾	101¾
1000	India Tire	23	22	22
35	Mohawk Rubber	11	11	11
10	Packard Electric	20¾	20¾	20¾
100	Peerless Motor rts	1/4	1/4	1/4
305	Seiberling Rubber	8	7½	7½
30	do pf	46	41	41
200	Thompson Products	37¼	37	37
150	Vichek Tool	18¼	17½	17½

DETROIT STOCK EXCANGE

Sales		High	Low	Last
410	Bower Roller Bear	16¾	16¾	16¾
1267	Detroit Motor Bus	5⅞	5⅞	6
230	Detroit Electric Bus	9¼	9	9
685	Excello	18¾	18¾	18¾
575	Ford of Canada	36¼	36	36
360	Federal Mot Truck	11¼	11	11
1030	G R. Metalcraft	9⅜	9½	9½
240	General Motors	47¼	47¼	47¼
580	Hall Lamp	13⅞	13¼	13¼
425	Hutto	7⅜	7½	7½
2085	Jackson M S	17⅜	15¼	16½
440	Motor Bankers	22½	22	22
100	MacAleer	19	19	19
100	Pittsburgh Forge	22	22	22
645	Packard	18½	18½	18½
365	Timken Axle	18	18	18
200	Universal Products	24½	24½	24½

WEDNESDAY, APRIL 30, 1930.
NEW YORK STOCK EXCHANGE

High	Low	Div.	Stocks	Sales	High	Low	Close	Net Chg.
104⅞	7	....	Advance Rumely	900	19⅝	16⅞	19⅝	+ 2⅞
119	15	....	Advance Rumely pf	300	34¾	34⅝	34¾	+ 4¾
223⅜	77	3	Air Reduction	14,800	144⅞	140⅞	144⅝	+ 4⅞
11¼	1	....	Ajax Rubber	400	2	1⅞	2	+ ⅛
75½	35⅛	3	Allis Chalmers	5,600	64	62⅜	63¾	+ 1⅝
76½	27	....	Am Bosch Magneto	1,300	40	37⅞	40	+ 1⅝
69⅞	63	3	Am Chain Co	1,000	64	63	63	— 1
101	70¼	7	Am Chain pf		No sales today			
8⅞	2	....	Am-La France		No sales today			
514	120	*4	Auburn	1,600	232	227	230	+ 1
104⅜	25	2	Bendix Aviation	12,300	44⅝	43⅜	44	+ ¼
136¾	37	3	Bohn Alum	100	53	51⅝	53	+ 1
86⅛	26	4	Borg-Warner	2,200	41⅜	40⅜	41	+ ⅜
63⅛	8½	....	Briggs Mfg Co	10,000	21½	20⅜	20⅜	+ ⅛
43½	17⅜	2	Briggs & Stratton		No sales today			
73⅞	13	....	Brockway Motor	300	20	18¼	18¼	+ ¼
22⅞	8⅛	1	E G Budd Mfg	2,500	12½	12¼	12⅜	+ ⅛
14⅝	7¾	1	Budd Wheel	10,100	13	12	13	+ ⅝
74	25	1.60	Bullard	5,400	61	58	59⅜	— ⅝
79¾	40¼	*3	Caterpillar Tractor	3,800	77¾	76¼	77⅛	+ ⅝
90¾	18	4.20	Checker Cab	13,400	48	44¾	48	+ 3¼
47½	20⅞	....	Chicago Pneu Tool	300	24¾	24¼	24¼	+ ¼
37	20⅞	3	Chicago Yellow Cab	10	29⅜	29⅜	29⅜	— ⅛
135	26	3	Chrysler Corp	14,900	36½	35⅝	36	— ¼
61⅝	25	3	Clarke Equipment		No sales today			
62⅝	18	2	Com Credit	3,600	34¼	32⅜	34¼	+ 1¼
105⅜	70	6.50	Com Credit pf	10	92	92	92	— 1
76	22⅛	‡1.60	Com Invest Trust	500	45⅛	45	45	— ⅜
29⅜	5⅝	....	Continental Motors	2,400	6¼	6	6	— ⅛
123¼	50	*3.50	Cutler-Hammer	100	78½	78½	78½	+ 2½
231	80	*4	Du Pont	2,900	134¾	132¾	133¼	+ 1¼
76¾	18	3	Eaton Axle & Spring	2,100	29½	28⅝	29¼	+ ¼
174	50	6	Electric Auto-Lite	11,300	96⅜	92¼	94	— 1
104½	55	5	Electric Stor. Battery		No sales today			
22½	3¼	....	Emerson Brant		No sales today			
73¾	15	2.50	Evans Auto Load	400	18½	17⅛	17⅛	— 1⅛
22⅜	5	.80	Federal Motors	600	10¾	10½	10½	— ¼
13¾	6	.64	Fifth Avenue Bus	50	8¾	8¾	8¾	....
37	24½	1.60	Firestone T & R	600	24⅝	24⅛	24⅛	— ⅞
89⅝	79⅛	6	Firestone T & R pf	200	81⅛	81⅛	81⅛	— 1⅞
20⅛	2⅛	....	Fisk Rubber	2,700	3⅞	3¾	3¾	— ¼
72½	8	....	Fisk Rubber 1st pf	100	14⅞	14½	14½	....
33⅞	5	....	Gabriel Co		No sales today			
95⅜	55¼	1.60	General Electric	600	88¼	86⅛	86⅝	+ ¼
25	3	....	Gardner Motor	76,300	5⅛	5	5	+ ⅛
91¾	33¼	*3	General Motors	64,700	47½	46¾	46⅞	+ ⅛
126½	112	7	General Motors pf	400	126½	126½	126½	....
64⅛	26	*2	Glidden Co	3,200	29⅜	29	29⅜	+ ⅛
106⅛	95	7	Glidden Co pf	70	101½	101	101	— ⅞
105¾	38¼	4	Goodrich	7,300	42½	38⅝	40	— 3
115⅛	95½	7	Goodrich pf		No sales today			
154½	60	5	Goodyear T & R	4,400	82	80¾	81	— ⅞
104⅞	86	7	Goodyear T & R pf	300	102¼	102	102	+ ⅛
54	7⅜	....	Graham-Paige Motor	900	10	9¾	9¾	+ ¼
68⅜	5½	....	Hayes Body	3,500	14	12¼	14	+ 1⅝
33½	21½	1.80	Hercules Motor	200	27½	27½	27½	— 1½
52⅝	13	2	Houdaille-Hershey B	2,300	21	20⅜	21	+ ⅛
93½	38	5	Hudson Motor Car	2,300	46½	45⅛	45¾	— ¼
82	18	2	Hupp Motor Car	2,300	20	19⅝	20	+ ¼
32½	3½	....	Indian Motocycle	3,700	10	9	9½	— ⅜
14¼	2	....	Intercon. Rubber	900	5¼	5	5¼	+ ⅝
142	65	2.50	Inter Harvester	9,800	110⅜	108	109	+ 1
145	137	7	Inter Harvester pf	1,300	143	143	143	....
242¾	90	3	Johns-Manville	9,400	113	108	110¼	— ⅜
16½	1½	....	Jordan Motor Car	1,200	3½	3¼	3¼	— ¼
24	3	....	Kelly-Springf'd	600	5	4⅜	4¾	....
55	29	....	Kelly-Springf'd 6s pf		No sales today			
94⅞	16	....	Kelly-Springf'd 8s pf		No sales today			
59¾	18⅝	2	Kelsey-Hayes Wheel	1,000	34	33⅛	33½	+ ⅞
25	5	....	Lee Rubber & Tire	100	7¾	7¾	7¾	....
61	37⅝	2.60	Link Belt	100	42	42	42	....
108⅞	22	2	Ludlum Steel	500	35⅜	33⅞	33⅞	— ⅝
114¾	55⅛	6	Mack Trucks	1,500	77	76	76⅝	+ ⅞
55	39⅞	4.75	Marlin Rockwell		No sales today			
104	19	2	Marmon	600	23½	23¼	23¼	— ⅝
18	2½	....	Martin Parry		No sales today			
34⅞	9	2	Mengel	900	18⅞	18⅛	18⅞	+ ¾
122⅞	44	2.50	Michigan Steel		No sales today			
53	37	3	Midland Steel	800	38	37⅛	37⅛	— ⅞
23⅞	3¼	....	Miller Rubber		No sales today			
16½	1½	....	Moon Motors	1,300	10½	10⅛	10⅛	+ ⅛
31¾	3¼	....	Motometer G & E	1,000	7⅝	7¼	7¼	— ¼
142	36	2	Motor Products		No sales today			
53⅛	21	3	Motor Wheel Corp	200	27⅜	27¼	27⅜	+ ⅝
81⅞	10	....	Mullins Mfg	200	17½	17½	17½	— ½
100⅞	14⅞	‡2	Murray Corp	3,700	30⅜	20	20⅜	+ ⅜
48⅞	40	6	Nash Motors	3,700	46⅞	45	45½	....
41⅞	14⅝	1.50	National Acme	900	18⅞	18¼	18⅞	+ ⅛
16¼	¾	....	Norwalk T & R	300	2½	2⅛	2⅛	— ⅜
10	9	....	Norwalk T & R pf		No sales today			
10⅞	2½	....	Omnibus Corp	300	5⅝	5½	5½	— ⅛
55	22¼	2.50	Otis Steel	900	34	33⅛	33¼	+ ¼
32⅛	13	1	Packard Motor Car	16,300	18⅜	18⅜	18½	+ ⅛
26⅛	15¼	1.50	Parmalee Transport	1,200	16⅜	16¼	16¾	+ ¾
22½	5⅛	....	Peerless Motor Car	300	8½	8⅛	8⅛	— ⅛
37⅝	18	....	Pierce-Arrow	400	27¾	27¾	27¾	— 2½
82	69½	6	Pierce-Arrow pf		No sales today			
30⅜	60	1.50	Pure Oil	1,900	25⅜	25¼	25¼	+ ⅛
58⅞	28	2.60	Raybestos Man	3,400	50⅜	48½	48½	+ ⅜
31⅞	10⅛	.80	Reo Motors	1,200	11½	11⅛	11½	+ ⅜
12¼	3⅝	....	Reynolds Spring	200	5	5	5	....
22½	9¾	1.20	Seagrave		No sales today			
31¾	19	1.40	Shell Union Oil	4,500	24⅜	23⅞	23⅞	....
45	21	2	Sinclair Oil	12,700	30⅜	29⅝	29⅝	+ ⅛
73	13⅛	1	Sparks-Withington	1,500	26¾	25¾	25⅞	+ ⅞
66⅜	20⅛	....	Spicer Mfg Co	100	24½	24½	24½	+ 1⅞
55⅞	33	3	Spicer Mfg Co pf		No sales today			
81⅞	51½	2.50	Stand Oil of Cal	21,600	74¾	73⅝	74⅛	+ ¾
84¼	48	*1	Stand Oil of N J	270,400	84⅞	83⅛	83½	— ⅛
48⅛	31¼	1.60	Stand Oil of N Y	68,800	40⅜	39¼	39¾	....
77	25⅜	1	Stewart-Warner Spd	5,100	30¼	28½	29½	....
89	35¼	5	Studebaker Co	9,500	38¾	35⅛	35⅝	— 2¼
126	115	7	Studebaker Co pf	20	121⅛	120	120	— ¼
39⅛	33½	2.40	Thompson Products	5,400	38½	36⅛	38⅜	+ 2⅞
34⅜	11½	.80	Timken Det Axle	1,700	18½	17⅜	17¾	— ⅛
139¾	58½	3	Timken Roll Bearing	1,800	83¼	82⅛	83¼	+ ¾
63	30	2.50	Trico	300	39⅝	39⅛	39⅛	— ⅞
243⅝	87⅛	*6	U S Ind Alcohol	2,700	91	89¼	89¼	— ¾
65	15	....	U S Rubber	4,400	29¼	27⅜	29¼	+ 2¼
92½	40⅛	....	U S Rubber 1st pf	1,800	53	51	53	+ 2
42⅞	15	1	Warner Quinlan	400	21¼	20½	20⅝	+ ⅛
67¾	36½	2	Westinghouse Air Br	700	45	44¾	45	+ ⅝
53½	27¼	2	White Motors	1,300	39	36	37½	+ 2
61¼	19	2.50	Wilcox Rich A	100	29⅛	29⅛	29⅛	....
62	12⅜	2	Wilcox Rich B	900	23¾	23⅜	23⅝	+ ⅛
35	5¼	....	Willys-Overland	1,200	7⅞	7¾	7¾	— ¼
103	65	....	Willys-Overland pf	300	75	75	75	....
88	61¾	4	Yale & Towne	1,000	62½	61½	62	....
51¼	7½	....	Yellow T & Cab B	9,200	29⅝	28¾	28⅝	+ ⅛
105	72	....	Yellow T & Cab pf	40	94⅝	94⅝	94⅝	....
59¾	33½	3	Young (L A) Sp & W	100	38¼	38	38	+ ½

*And extra. †And 6 per cent. in stock. ‡And stock.